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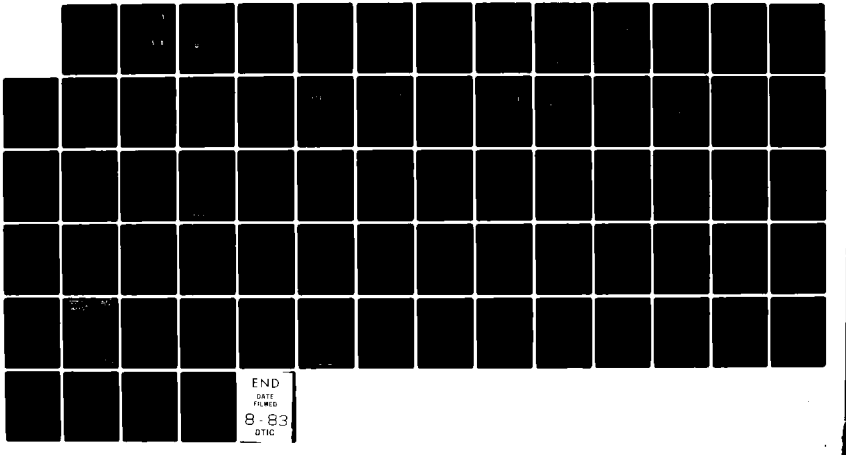

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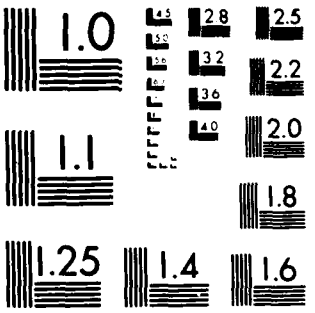

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8 June '83

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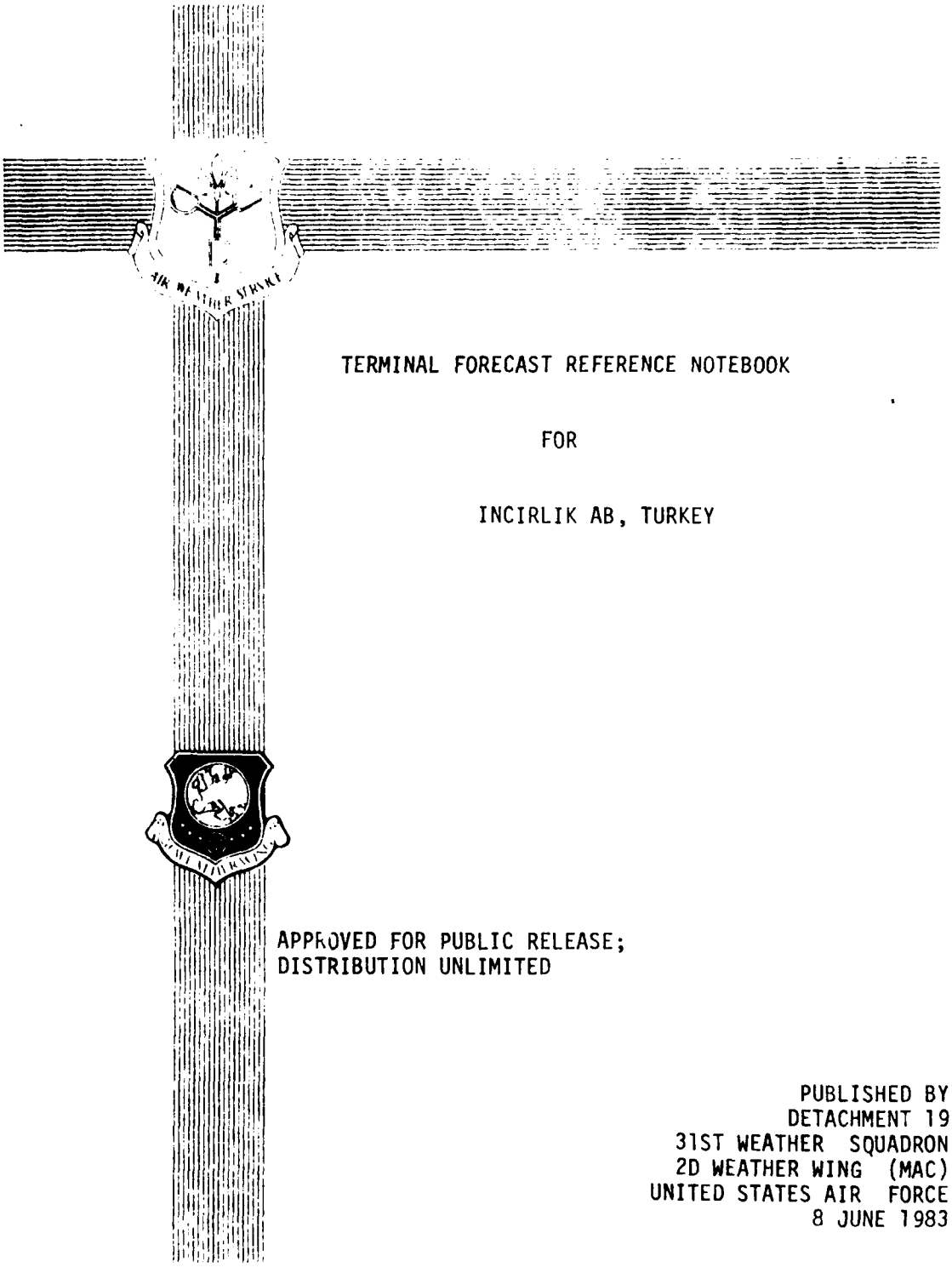

TERMINAL FORECAST REFERENCE NOTEBOOK

FOR

INCIRLIK AB, TURKEY

PUBLISHED BY
DETACHMENT 19
31ST WEATHER SQUADRON
2D WEATHER WING (MAC)
UNITED STATES AIR FORCE
8 JUNE 1983

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

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7. AUTHOR(s)		8. CONTRACT OR GRANT NUMBER(s)
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SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

TERMINAL FORECAST REFERENCE NOTEBOOK
INCIRLIK AB TURKEY

TABLE OF CONTENTS

LOCATION AND TOPOGRAPHY

1. Incirlik is located in the center of the Cilician Coastal Plain. Adana, Turkey's fourth largest city, lies five miles to the west. Two river systems traverse the plain, the Seyhan seven miles to the west of Incirlik and the Ceyhan ten miles to the east.

2. The surronding topography is quite complex. The Cilician Plain is approximately triangular in shape, with the Mediterranean Sea lying 30 miles southwest through southeast. To the south and southwest, the plain is open with a gentle slope to the sea with no intervening barriers. To the northeast, the plain rises to about 1000 feet and levels off in approximately 20 miles. The plain then continues northeastward at an elevation of 1000-1500 feet for 30 miles before joining the Anti-Taurus Range. Minimum elevations along the Anti-Taurus Range average 5000 feet, with many peaks between 7000 and 13000 feet. To the east and southeast the plain is relatively flat except for a short range of low lying mountains oriented northeast to southwest 13 miles southeast of the base. The range is about 13 miles long and averages 2000 feet in elevation. About 40-50 miles to the west through northeast of Incirlik lies the main Taurus Mountain Range, with average elevations of 8000 feet, and peaks to 13000 feet. The plain slopes upward slowly west through northeast before rising abruptly to about 1000 feet, about eight miles from the base.

INCIRLIK LOCATION AND TERRAIN SUMMARY

1. International Data:
   a. Incirlik AB, Adana, Turkey
   b. International Index: 17350
   c. Latitude: 37.00°N., Longitude: 35.26°E.
   d. Height of the runway: 238 feet
   e. Height of the Ivory point: 254 feet

2. A statement of the Incidence of Weather at Incirlik. Before outlining the factors which influence the Incirlik weather, the general climatology of the base should be noted. Climatological data indicates that the weather deteriorates to less than 1500 feet and/or 3 miles less than 1% of the time. Conditions of less than 200 feet and/or 1/2 mile, which would close the field, occur a total of less than 10 hours per year (less than 0.1%).

3. Geographical Features and their influences:

a. Incirlik AB is located six miles east of Adana, Turkey's fourth largest city. The city is located in the west central portion of a large valley known historically as the Cilician Plain. This valley, roughly triangular in shape, is traversed from north to south by two major rivers. The rivers are fed by distant mountain flowage and also by numerous streams in the valley. To the south and southwest the valley is open with a gentle slope to the sea and with no intervening barriers. To the east and northeast the floor of the valley rises to about 1000 feet and levels off, in approximately 20 miles, into an extensive ancient swamp region. However, this region has been drained and developed into a rich farming area. The valley continues eastward at an elevation of 5000 feet with peaks near 7000 feet. This barrier, oriented NNE-SSW, is nearly unbroken. Passes do exist near the 3000 foot level. Beyond this mountain barrier, known in history as the Anti-Taurus, the terrain lowers again to about 1000 feet in a narrow rift valley with ancient Antioch at the southern end. To the east of this valley the exposure is open to Syria and the Eupharates River valley.

b. To the west through the northeast of the Cilician Plain rise the spectacular Tauras Mountain Range. The valley floor slopes upward slowly, with the numerous indentations, for about 15 miles and then abruptly rises to a solid barrier near 6000 feet with many peaks between 7000 and 13000 feet. This range is snow covered during the winter months and is major influence on the local weather. North and west of this mountain range is the high plateau of central Turkey, ranging from 4000 to 6000 feet. There is a deep valley in the Taurus Range between Konya on the plateau at the northwest and Silifke at the coast to the southeast.

c. The effects of topography on the Incirlik weather is generally favorable. The intensity of the fronts which move to the south and southeast is greatly diminished by the adiabatic effect on their passage from the high plateau over the Taurus Mountain barrier and down to the near-sea-level elevation of the Cilician Plain. The air masses are warmed and dried, and characteristically the only effect is the gusty winds from the north or northwest.

d. The northeast to southwest drainage wind which is the dominate winter feature (and the nightime diurnal feature of the other seasons) holds the polluted air of Adana to the southwest away from Incirlik. The diurnal southwest sea breeze, which is an equally dominant feature in those seasons other than winter, occurs when the pollution is at a minimum. Further the very process which conceives the sea breeze- convection- is a disperser of pollution. The primary role of the sea breeze, then, is that of moderating the summer maximum temperatures.

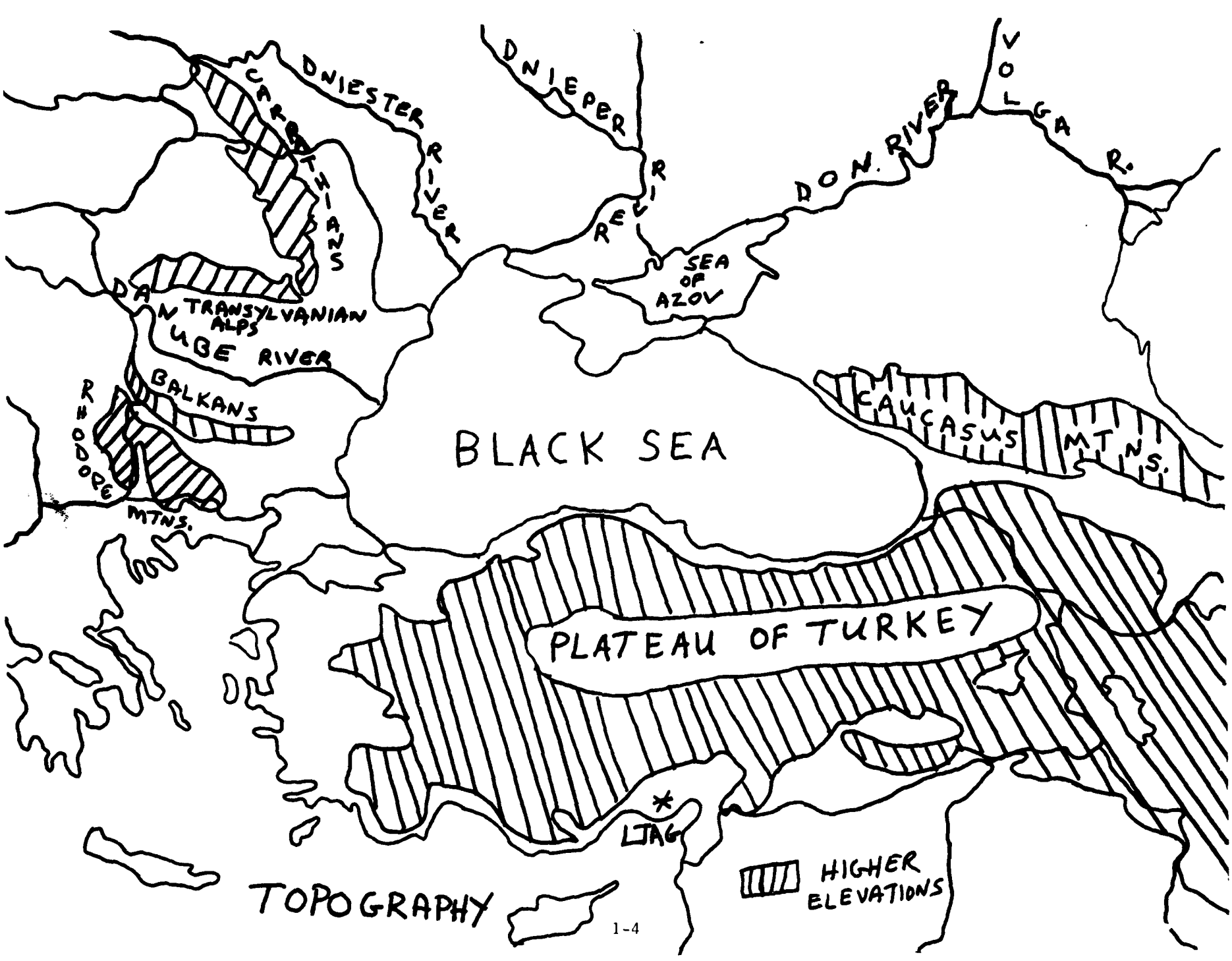
4. Vegetation and its Influence: Vegetation in the valley consists mainly of large areas of cotton. Dry grain crops of wheat, millet, and beans, in the drier regions, are secondary in amount. Table vegetable crops are grown extensively to the southwest towards Taurus city where temperatures are milder and water more plentiful and dependable. Extensive rice farming is carried out in the ancient swamp region to the northeast and east. Trees are rare outside of the forest preserves and are found only in villages, public places, and along the rivers. To the south and west are large citrus groves under extensive development, and the areas are under vigorous cultivation using gravity irrigation and pumping. Public or open foraging with sheep and goats is widely practiced during the colder and wet season in the local vicinity. Later the flocks are driven to the higher elevations. This practice leaves little if anything green growing, other than the cotton and the dry land crops. It is felt that the vegetation has little effect on the Incirlik weather.

5. Atmosphere Pollution and its Influence: There are several large producers of smoke in Adana proper. The industrial area is about 5 miles southwest of Incirlik. Brick factories are in continuous operation along with crude iron smelting activities. A cement factory is 4-5 miles southeast of the base. During the winter months there is considerable use of low grade fuel for eating and cooking. Visibilities have been observed as low as 1/4 mile in the industrial area closest to the base, while the prevailing visibility at Incirlik was 2-30 miles. However, as explained in an earlier paragraph, the valley breeze from the northeast effectively holds the pollution to the southwest. It is also felt that the effect of atmospheric pollution of the Incirlik weather is negligible.

6. The Mediterranean Sea and its Influence:

a. Incirlik is situated at the northeast corner of the Mediterranean Sea at the end of air trajectories which often have had long-water fetches from the WSW and SW. However, the Taurus Mountain Range plays a role here too. The huge southern prominance of the Taurus extends many miles into the Mediterranean acting as a protecting barrier as far south as the 240° radial from Incirlik. 100 miles to 200 miles southwest lies the island of Cyprus, with a 4000 to 6000 foot minor mountain range in the west central portion of the island. Between this range and the Taurus to the north, is a 30-50 mile wide open sea channel. Cyprus as a wedge or as a block in the path of the flow from the southwest, further deflects and channels the air streams into the Cilician Plain.

The Mediterranean is a great source of energy (moisture) for both the major and the minor storms moving from the west or southwest. Conversely, however, occurrence of stratus and fog is surpressed by the overwhelming influence of the northeast drainage flow discussed in an earlier paragraph. Although many ingredients are present in the immediate locale for the formation of thunderstorms-moisture, thermal contrast between land and water, and mountains for mechanical lift-the overall geography and topography results in a semipermanent east-west trough along the Mediterranean-South Turkey coast which is the prime generation source for thunderstorms. It is felt that the trough can be uniquely established as either a thermal or a lee-side phenomena. Both processes act in concert or individually, by season, to maintain this semi-permanent feature.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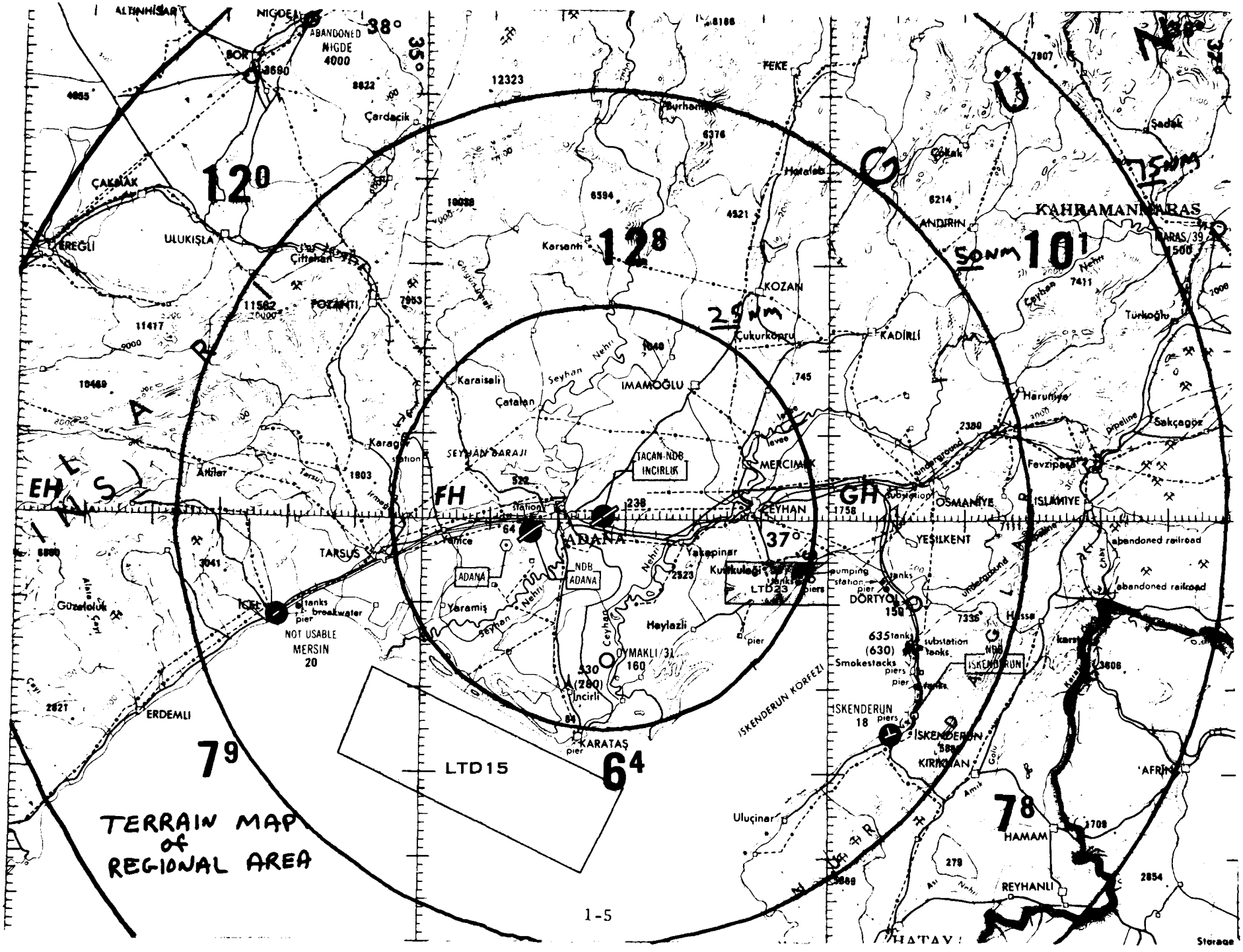
BLACK SEA
CAUCASUS MTNS.
PLATEAU OF TURKEY
LHAG
HIGHER ELEVATIONS
TOPOGRAPHY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6°
7°
8°
TERRAIN MAP
of
REGIONAL AREA

AIRFIELD LAYOUT, WEATHER EQUIPMENT AND LOCAL WEATHER

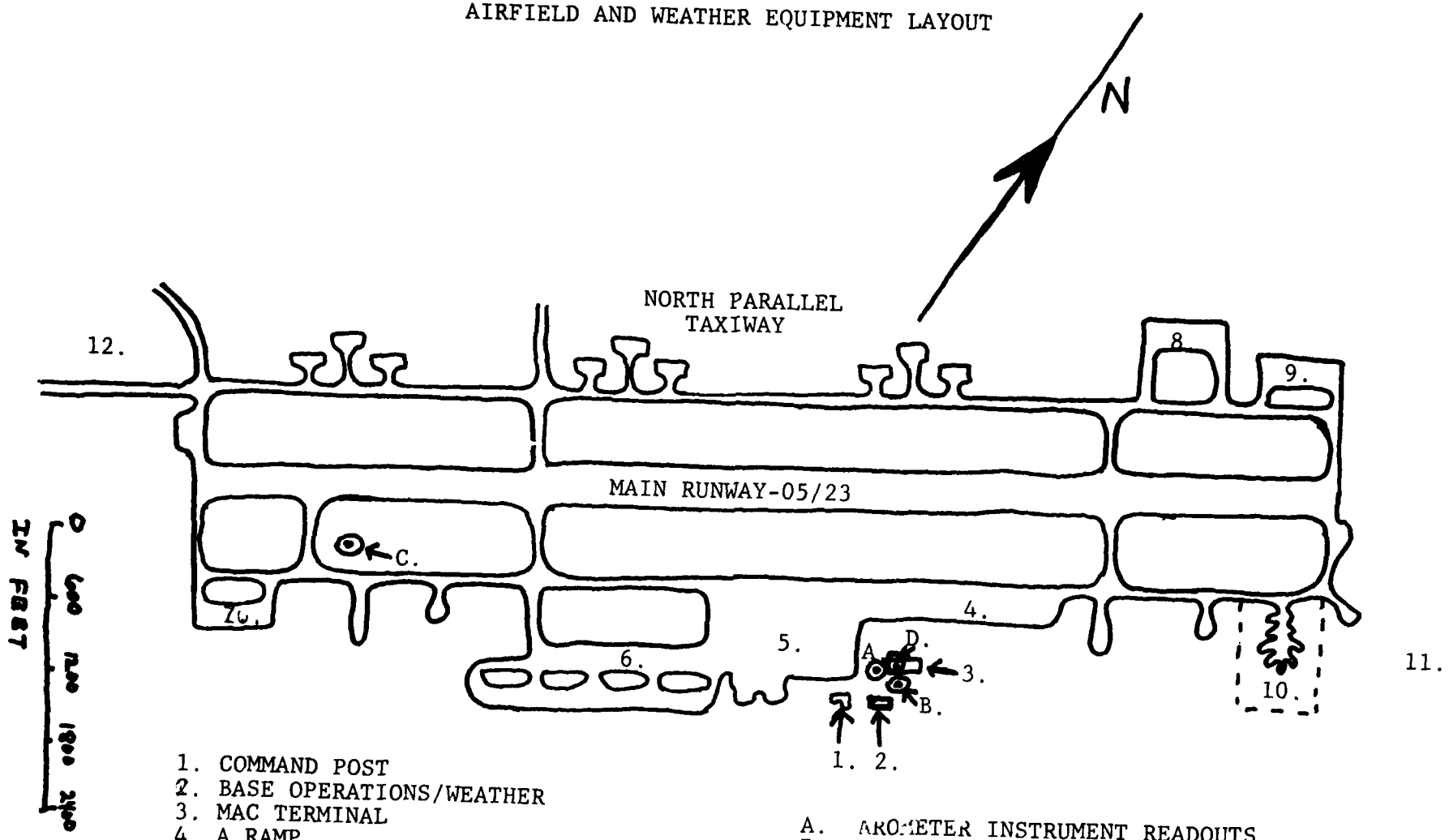
1. Location of Instruments: Location of the following instruments is indicated on the airfield layout map on the following page.

a. Barometer instrument readouts.
b. Thermometers and rain guage.
c. Wind speed and direction transmitter.
d. Satellite antenna.

2. General: Due to its location, Incirlik experiences a Mediterranean type climate, a short mild winter and a long hot summer. During the winter months the Taurus Mountain Range acts as a barrier blocking all but the most intense cold outbreaks. The intensity of fronts which move in from the northwest is greatly diminished by the adiabatic effect while passing over the Taurus Mountains and continuing down to the near sea level elevation of the Cilician Plain. The air masses are warmed and dried, with the only effect being gusty surface winds from the northwest through northeast. The mountains which ring the plain from west through north to east form a basin in which the air often stagnates. This condition is more common during the summer months when the mountains are generally obscured in haze.

3. Cloudiness and Visibility: Cloudiness is most prevalent during the winter months, reaching a maximum during December and January. Incirlik is situated at the northeast corner of the Mediterranean Sea at the end of air trajectories which often have had a long over-water fetch. However, the Taurus Mountains, which extend to the Mediterranean Sea, westsouthwest of Incirlik act as a protecting barrier as far south as the 240 radial from the base. A wind direction of less than 200 usually gives flow off the dry Sahara, and the trajectory across the Mediterranean is to short to pick up significant moisture. The exception to this would be a system which moves eastward through the channel between Cyprus and Turkey. During the summer months the skies are predominately clear. Low stratus develops late in the evening, last one-two hours and dissipates. The status then then reforms near daybreak and dissipates rapidly after sunrise.

AIRFIELD AND WEATHER EQUIPMENT LAYOUT



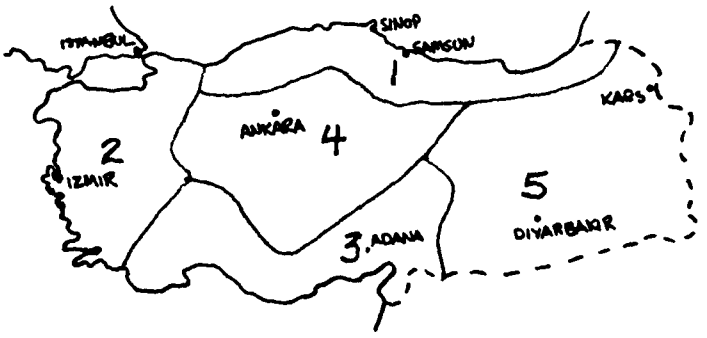
1. COMMAND POST
2. BASE OPERATIONS/WEATHER
3. MAC TERMINAL
4. A RAMP
5. B RAMP
6. C RAMP
7. D RAMP
8. E RAMP
9. F RAMP
10. VA PAD
11. DECON AREA
12. TAB VEE AREA

A. BAROMETER INSTRUMENT READOUTS
B. THERMOMETERS AND RAIN GUAGE
C. WIND SPEED AND DIRECTION TRANSMITTER
D. SATELLITE ANTENNA


LGTS
SNLL
LTCC
LCNC
LLLD

THE CLIMATE OF TURKEY

The Climate of Turkey can be characterized as one of extremes and variability. For instance, the season of maximum rainfall varies from winter in the south and west to spring in the central plateau to summer in the northern coastlands and to autumn in the extreme northeast. The reasons for such contrast are to be found in (1) topography, (2) the geographical position of Turkey — on the margin of the Mediterranean and interior asiatic climatic zones — and, (3) the large extent of water bodies which have a modifying influence. Therefore, it is convenient to describe the climate of Turkey on a basis of its natural regions. These regions are:



1. Black Sea Coastlands
2. Aegean Coastlands
3. Mediterranean Coastlands
4. Central Plateau
5. Eastern Turkey

1. The Black Sea Coastlands. In the Black Sea Coastland winters are mild. The average January temperature ranges from 43 to 45 degrees with the exception of the inland localities. For example, Merzifon, a short distance south of Samsun, has a mean temperature for January of 30 degrees while Samsun, which

is located along the coast, has a January mean of 44. A special feature of the Eastern Black Sea Coastland is the prevalence of Föhn or adiabatic winds in the winter. These occur when heavy stagnant air from the Plateau moves toward the coast. As much as 30 to 40 degrees of warming may take place as air descends the 7 to 10 thousand feet from the interior. Although the air may be initially below freezing, temperatures of 60 or even 85 degrees may be attained at sea level. Thus, instead of a beneficial wind that would temper the rigours of winter, an unduly warm blast may actually wither growing vegetation. It is significant that at Samsun, temperatures of 70 degrees have been recorded in January and February and over 80 in March.

Rainfall is abundant almost everywhere and ranges from 25 inches in the west to over 100 inches in the east. While February is the wettest month in the west, we find that November is the wettest in the east.

2. Aegean Coastlands. Temperature conditions in this region have some similarity to those of the Black Sea region, though local variation is somewhat more prominent, and there is a marked rise in temperature toward the south. In winter, there is a January minimum of 41 to 46 degrees on the coast and 35 to 40 inland. Rainfall is fairly evenly distributed over the entire region with amounts ranging from 20 to 30 inches per year near the coast and 15 to 20 in the extreme east. December is the wettest month.

3. Mediterranean Coastlands. In this region, winters are considerably warmer; on the coastal lowlands the mean temperature for January (which is the coldest month) ranges from 48 degrees at Adana to 52 degrees at Iskenderun. Rainfall is moderate in amount, but considerable local variation occurs depending upon aspect and altitude. In general, the southern slopes of the Taurus Range

receive more than 30 inches per year while the lowlands between the Taurus Mountains and the Mediterranean Sea receive 20 to 30 inches. A few areas that are especially open to the sea receive slightly above 30 inches. December and January are the wettest months.

4. The Central Plateau. This region is characterized by a wider range of temperatures and by greater aridity. The winters are cold with January temperatures averaging 30 over most of the Plateau. Between 10 and 17 inches of rainfall are received annually; the precise amount depends largely upon height of the terrain. For example, Konya and Ankara, which are at approximately similar elevations, have 11.5 and 10.0 inches, respectively; Sivas, which is 1,000 feet higher, has 17 inches. It is somewhat remarkable that May is, in general, the wettest month, while July and August, only a few months later, are the driest.

5. Eastern Turkey. This is a region of great extremes, with a climate that is one of the most varied and severe in the World. Winters are cold even in the extreme south where Diyarbakir has a mean January temperature of 31. To the north, the cold is even more intense; at Kars, the mean January temperature is 9 degrees with an average low temperature of minus 5. An absolute low of 30 below zero has been recorded and, on the higher plateaus, temperatures of 40 below are not unknown. Thus, it is not surprising that snow remains for over 120 days each year in the northeast, but only 7 to 10 days at Diyarbakir. Because of the greater altitude, eastern Turkey is not as arid as the Central Plateau. The annual rainfall varies between 17 and 24 inches. February and March tend to be the months of heaviest rainfall. However, in the northeast the wettest months are May and July at Erzurum and Kars, respectively.

OPERATIONALLY CRITICAL FORECAST ELEMENTS

PARAMETERS	CRITICAL VALUE	CUSTOMERS	REASON
CIG/VIS (FT/NM)	3000/3.0	C,D	VISUAL FLIGHT RULES threshold and Konya minimums
	1000/2.0	C,D	Alternate landing field planning criteria
	300/1.0	C	Cat I Pilot
	200/0.5	D	Published Field Minimums
WINDS (KNOTS)	25	C	Radomes must be covered
	50	C	Canopies must be closed
	60	C	Air Foils must be placed in Flight position
	80	C,D	Aircraft must be Hangared or evacuated
	X-35	C	Dry Runway crosswind maximum
	X-12	C	Wet Runway crosswind maximum
MISC			
POLC	80% or GTR W/I 25 NM	C,D	Hazard to Aviation warranting Pilot Attention
LLWS	W/I 25 NM	C,D	Hazard to Aviation warranting Pilot Attention
FRZG PRECIP	ANY	C,D	Hazard to Aviation warranting Pilot Attention
HAIL	½ in. or GTR	C,D	Hazard to Aviation warranting Pilot Attention
LIGHTNING	W/I 5.0 NM	C,D	Cease ground Aircraft refueling
TEMP	90°F	B	Canopies must remain open

LEGEND

A) F-4
B) F-111
C) F-4, F-111
D) C-130, C-141, C-9, C-5

* ALTERNATE LANDING FIELD PLANNING CRITERIA FOR C AND D ARE LISTED AS 1000/2.0 OR 500/1.0 ABOVE THE PUBLISHED MINIMUMS, WHICHEVER ARE HIGHER.

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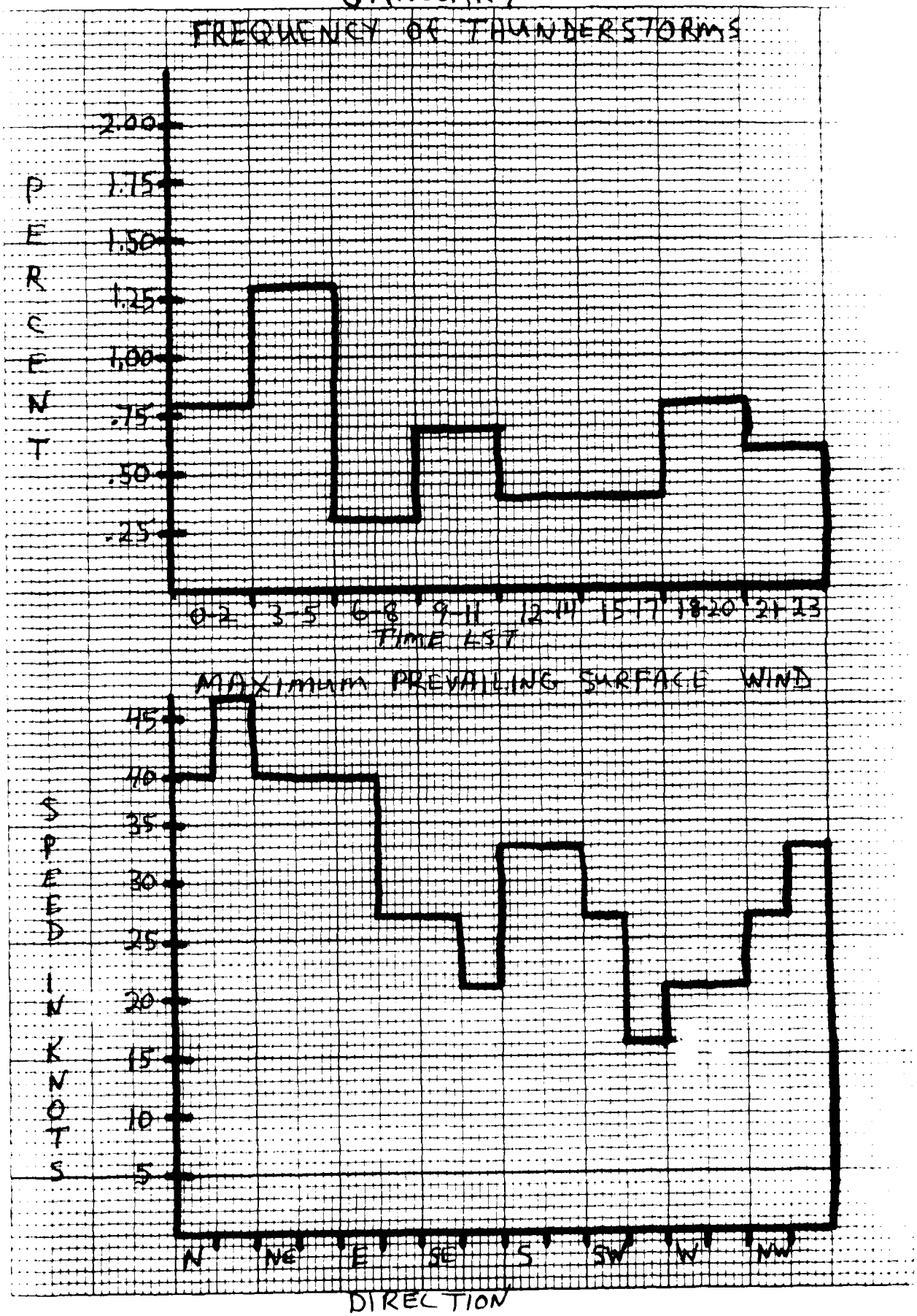
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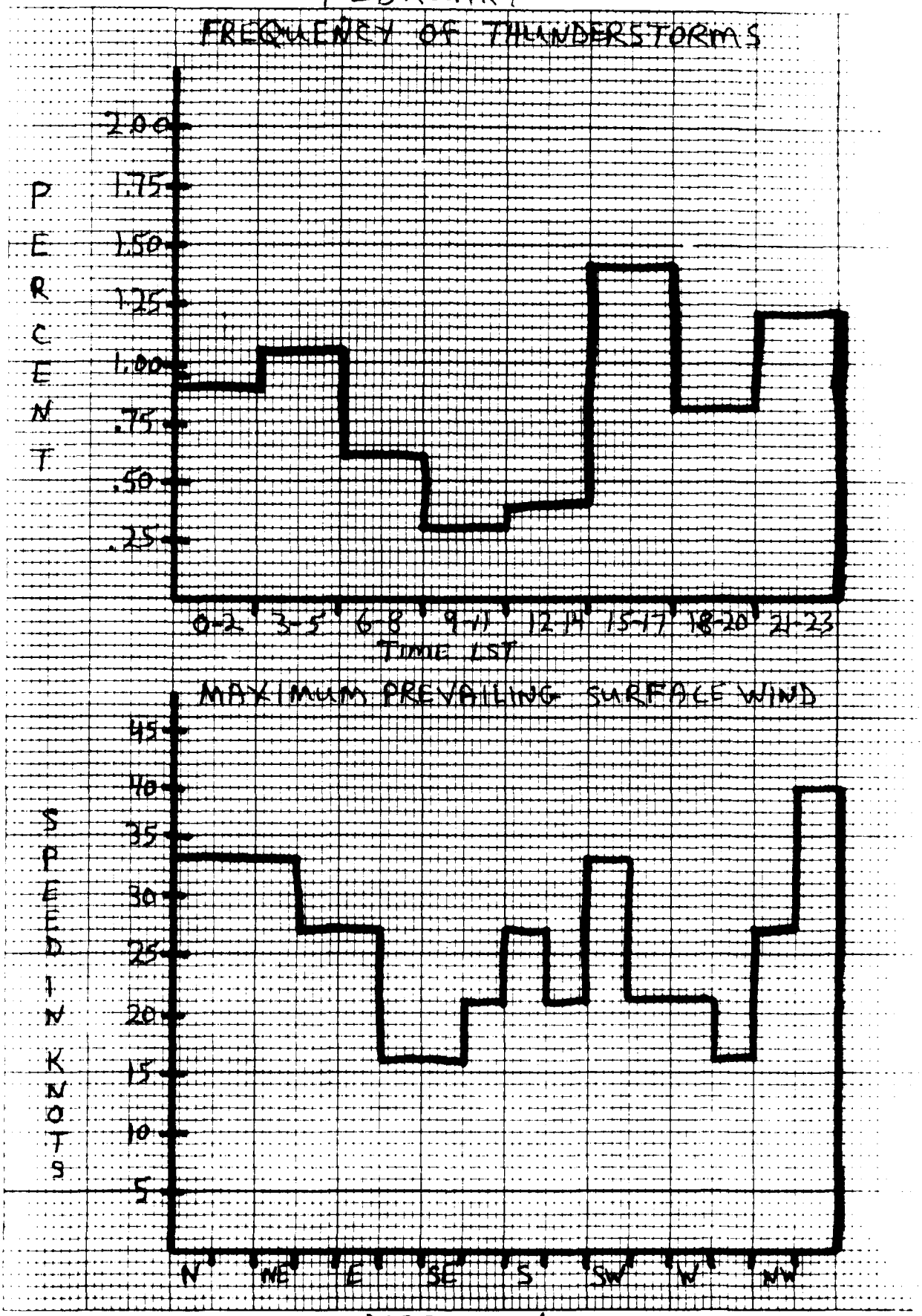
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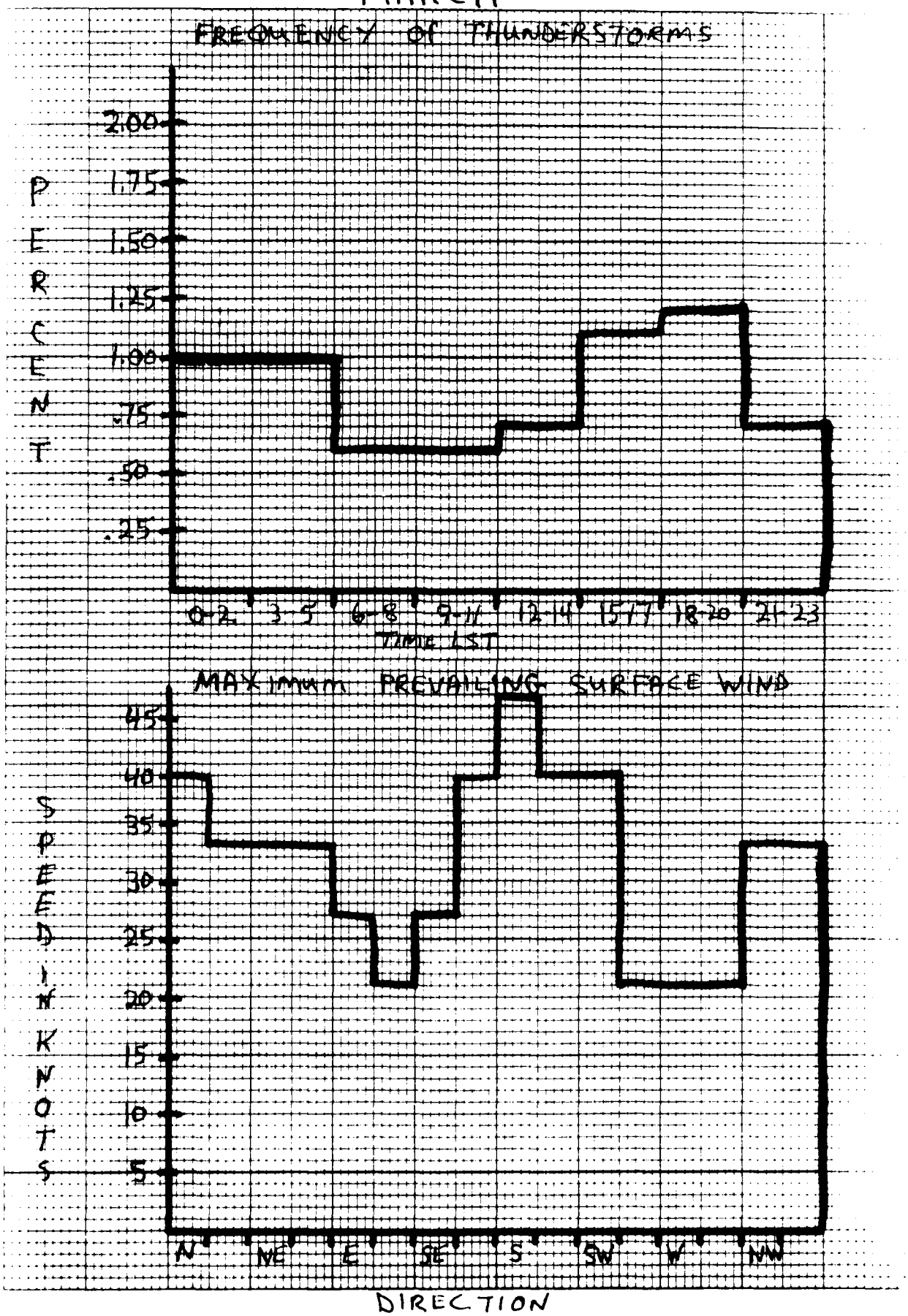
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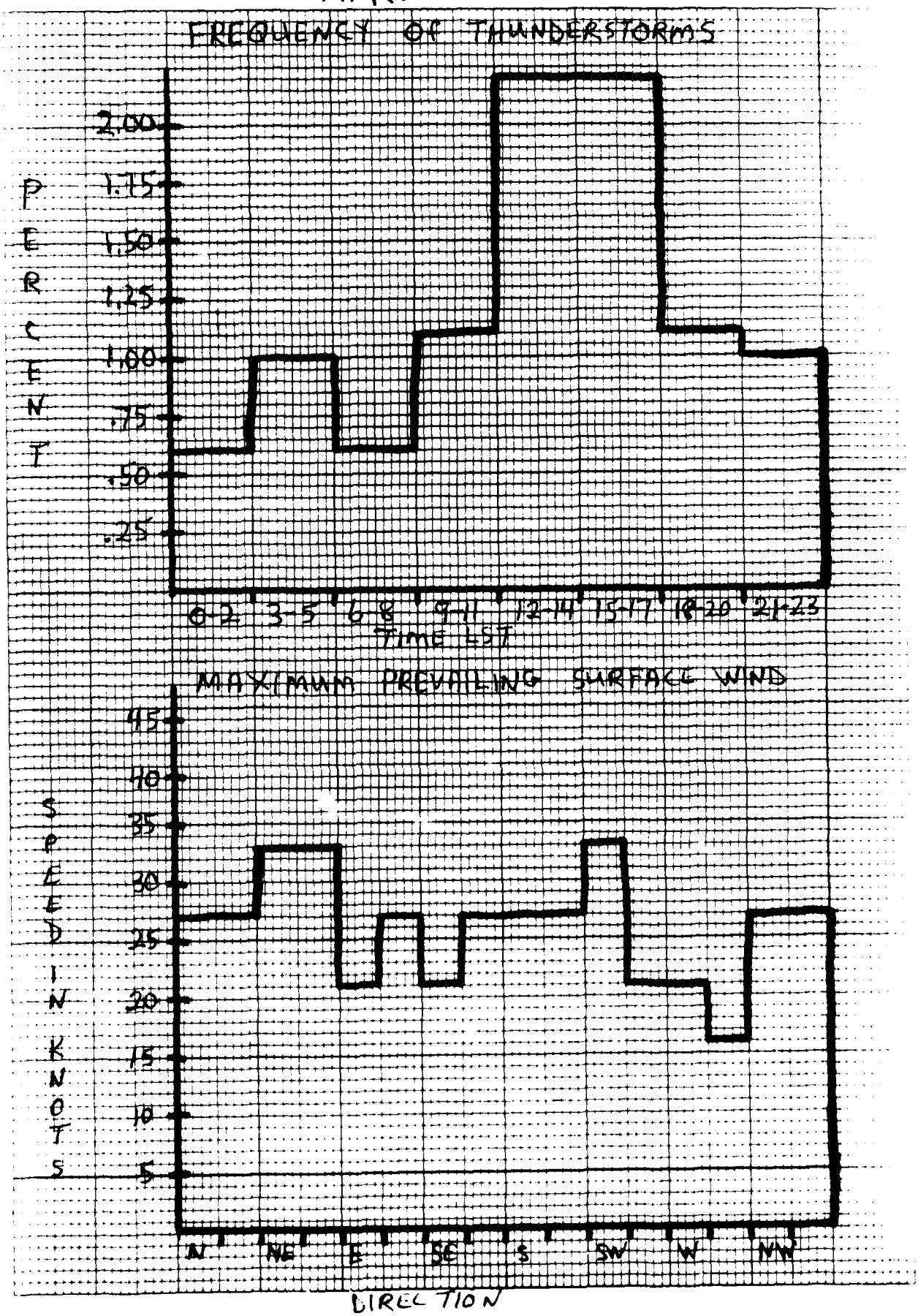
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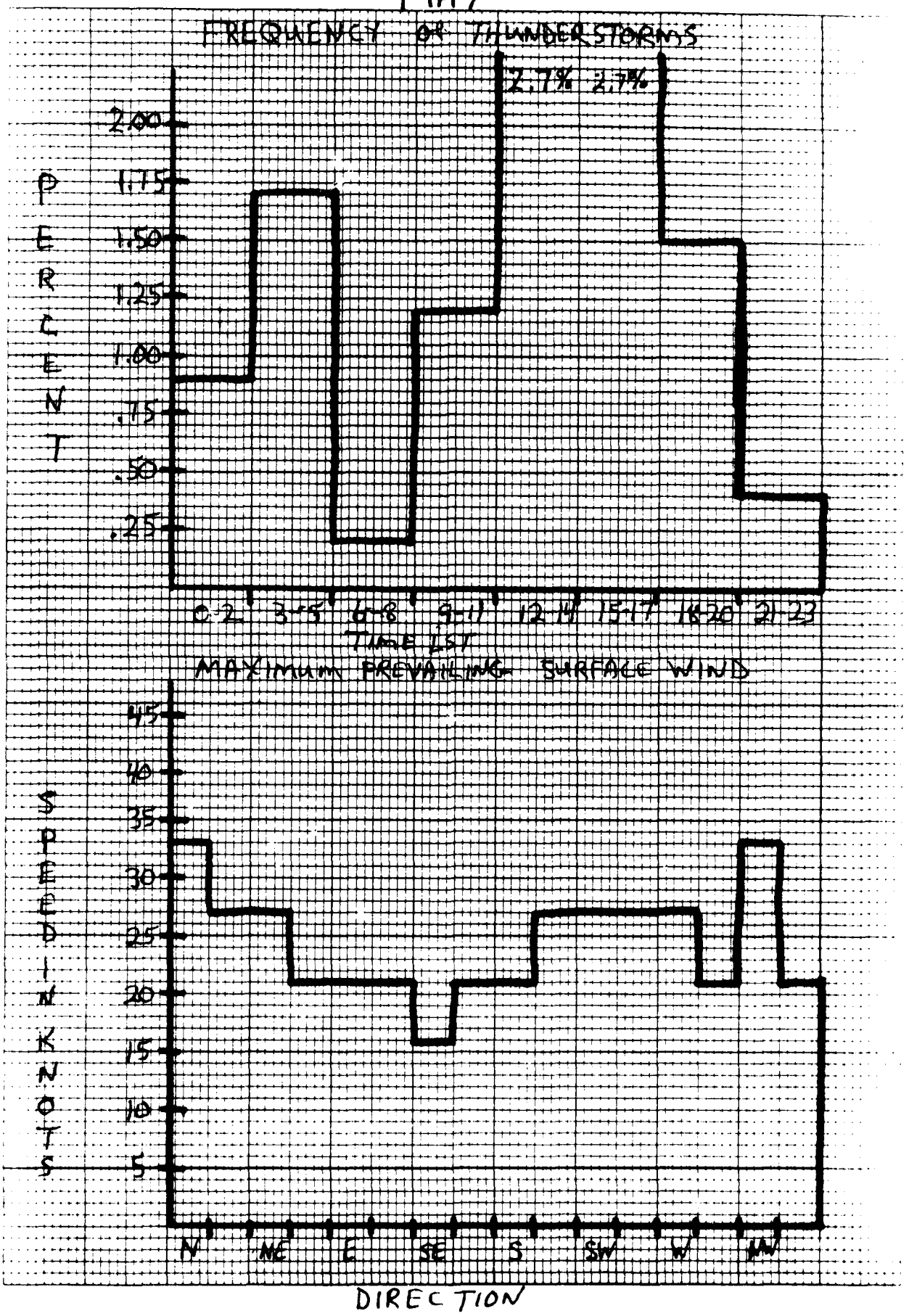
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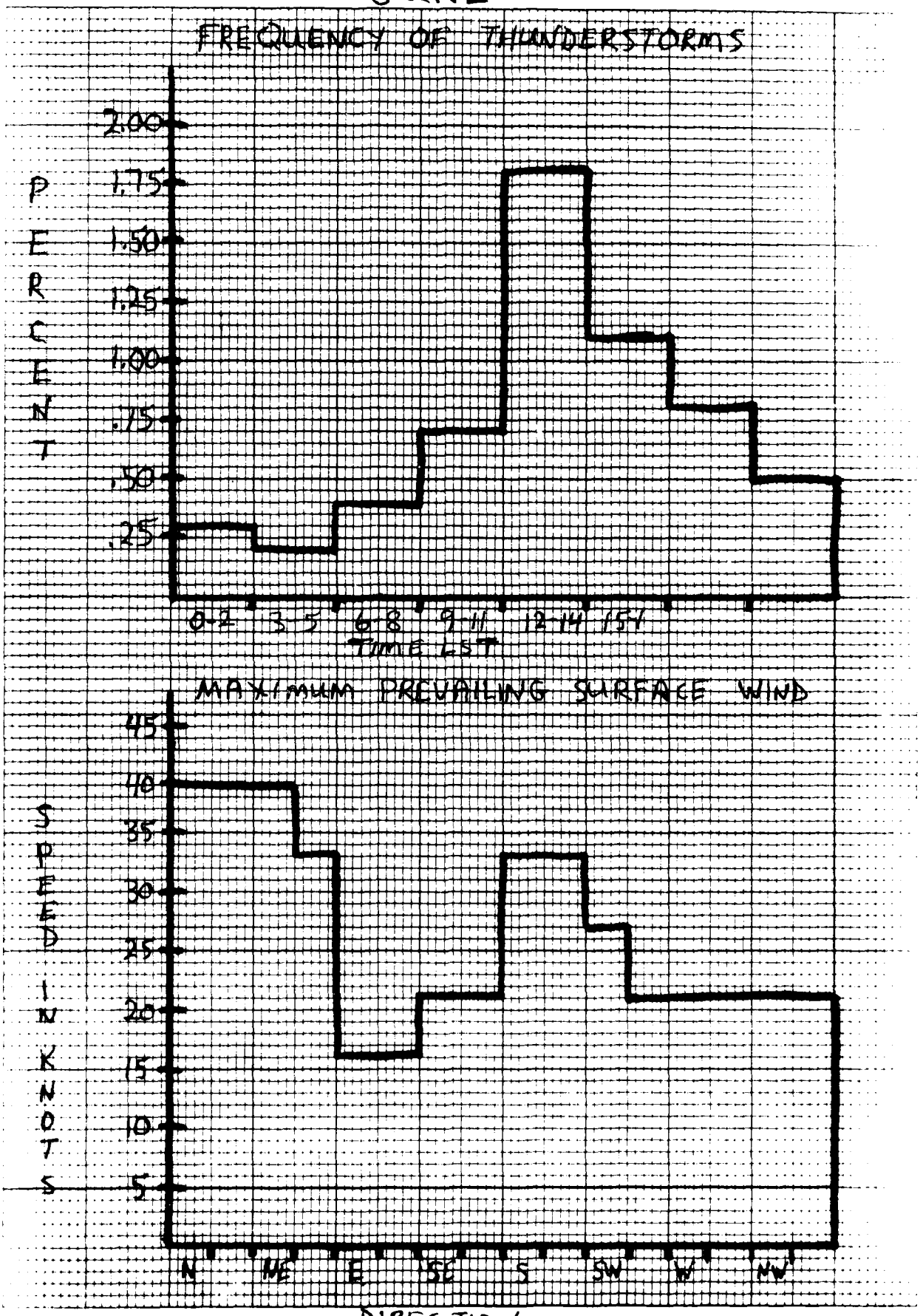
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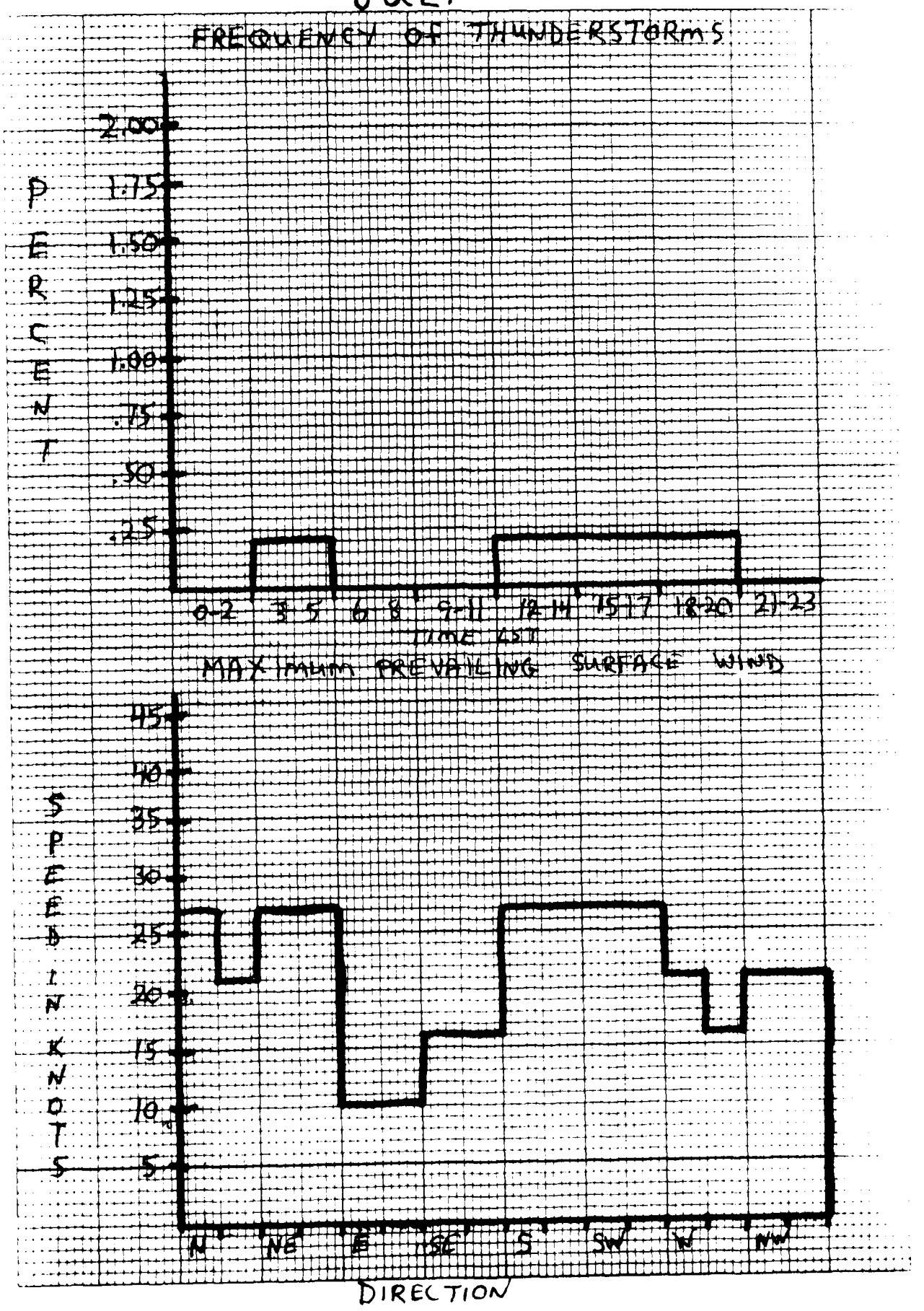
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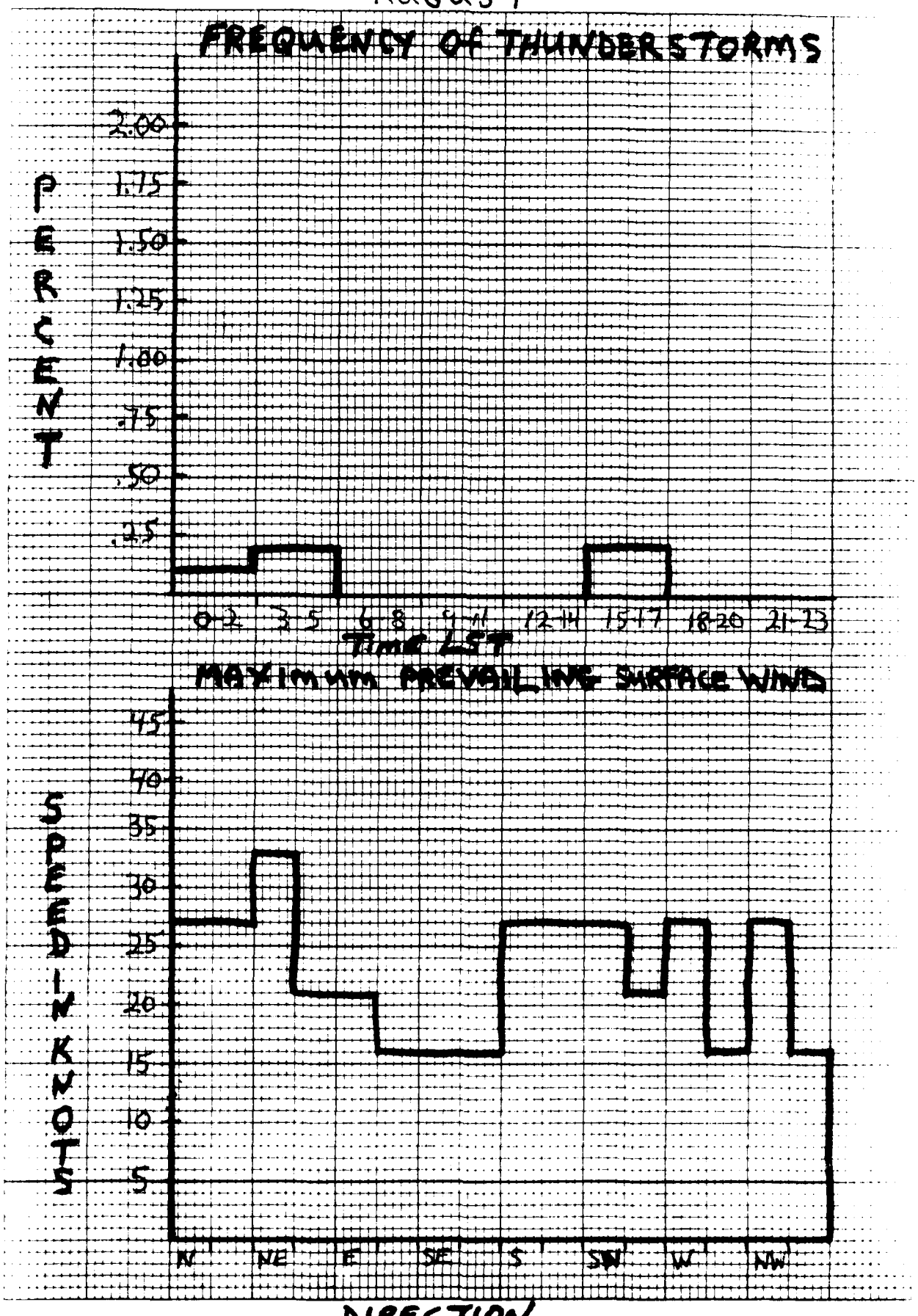
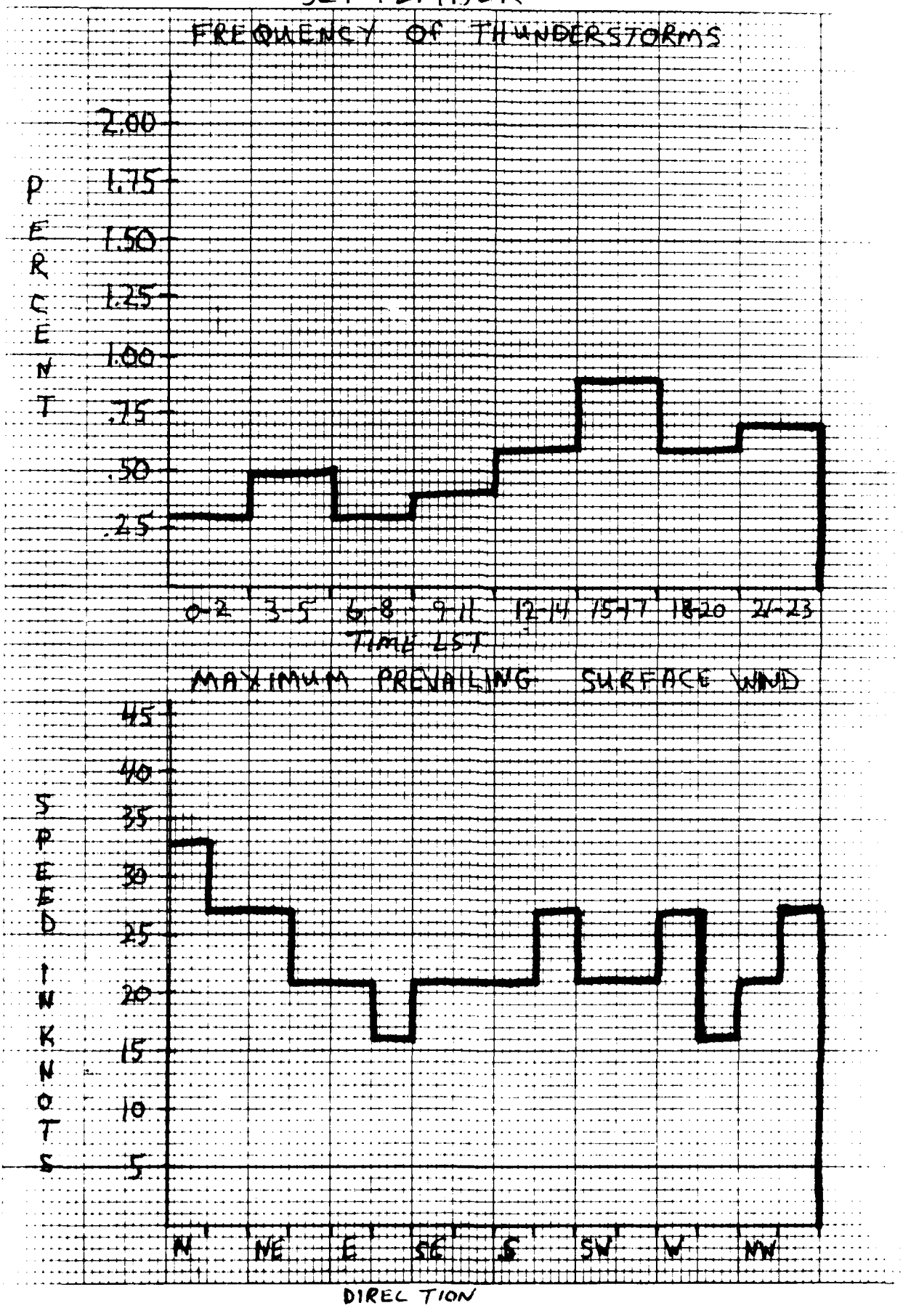
TIME (EST)
MAXIMUM PREVAILING SURFACE WINDS
SPEED IN KNOTS
45
40
35
30
25
20
15
10
5
N
NE
E
SE
S
SW
W
NW
DIRECTION

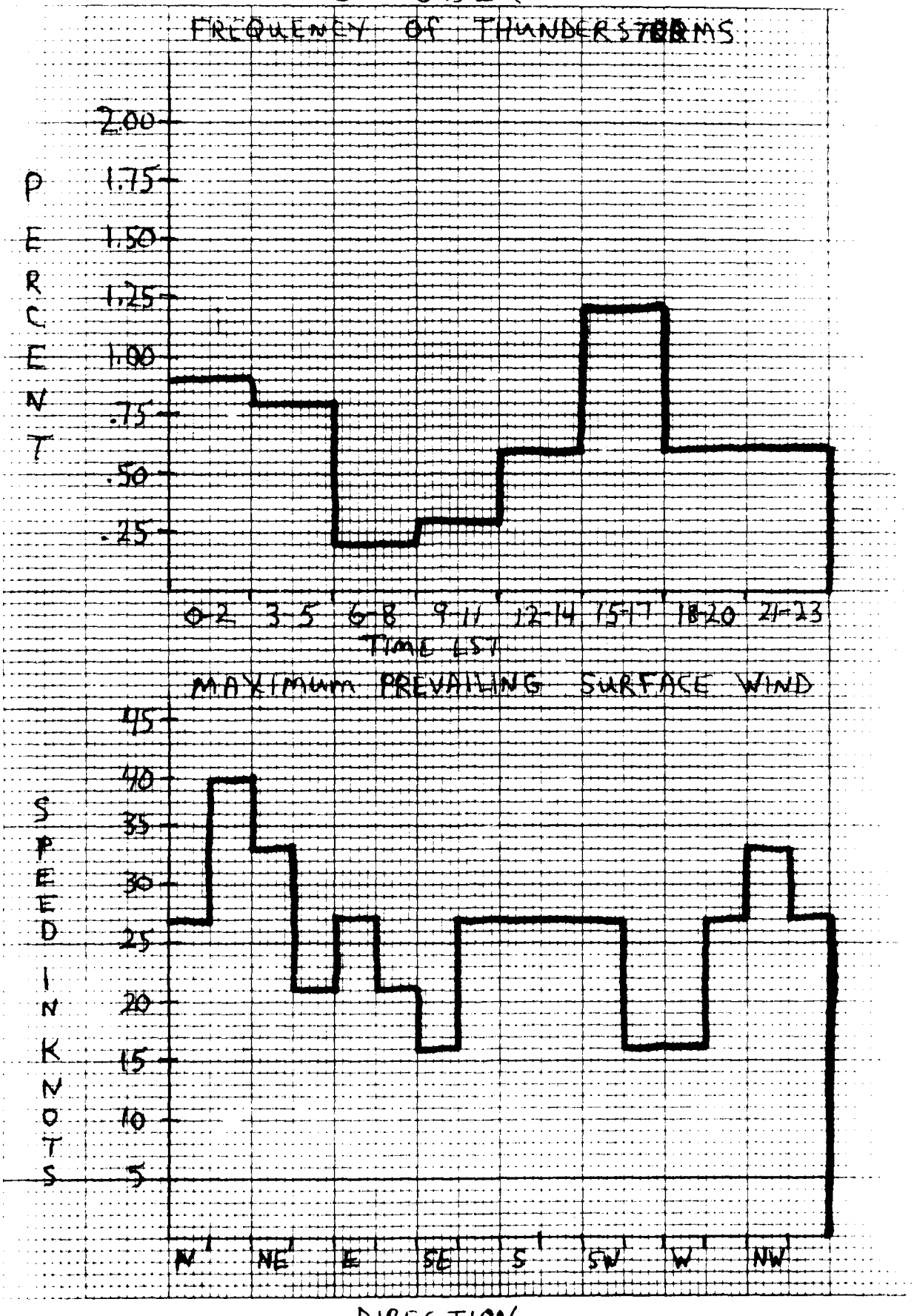
AUGUST


FREQUENCY OF THUNDERSTORMS
PERCENT
2.00
1.75
1.50
1.25
1.00
.75
.50
.25
0-2
3-5
6-8
9-11
12-14
15-17
18-20
21-23
Time LST
MAXIMUM PREVAILING SURFACE WIND
SPEED IN KNOTS
45
40
35
30
25
20
15
10
5
N
NE
E
SE
S
SW
W
NW
DIRECTION

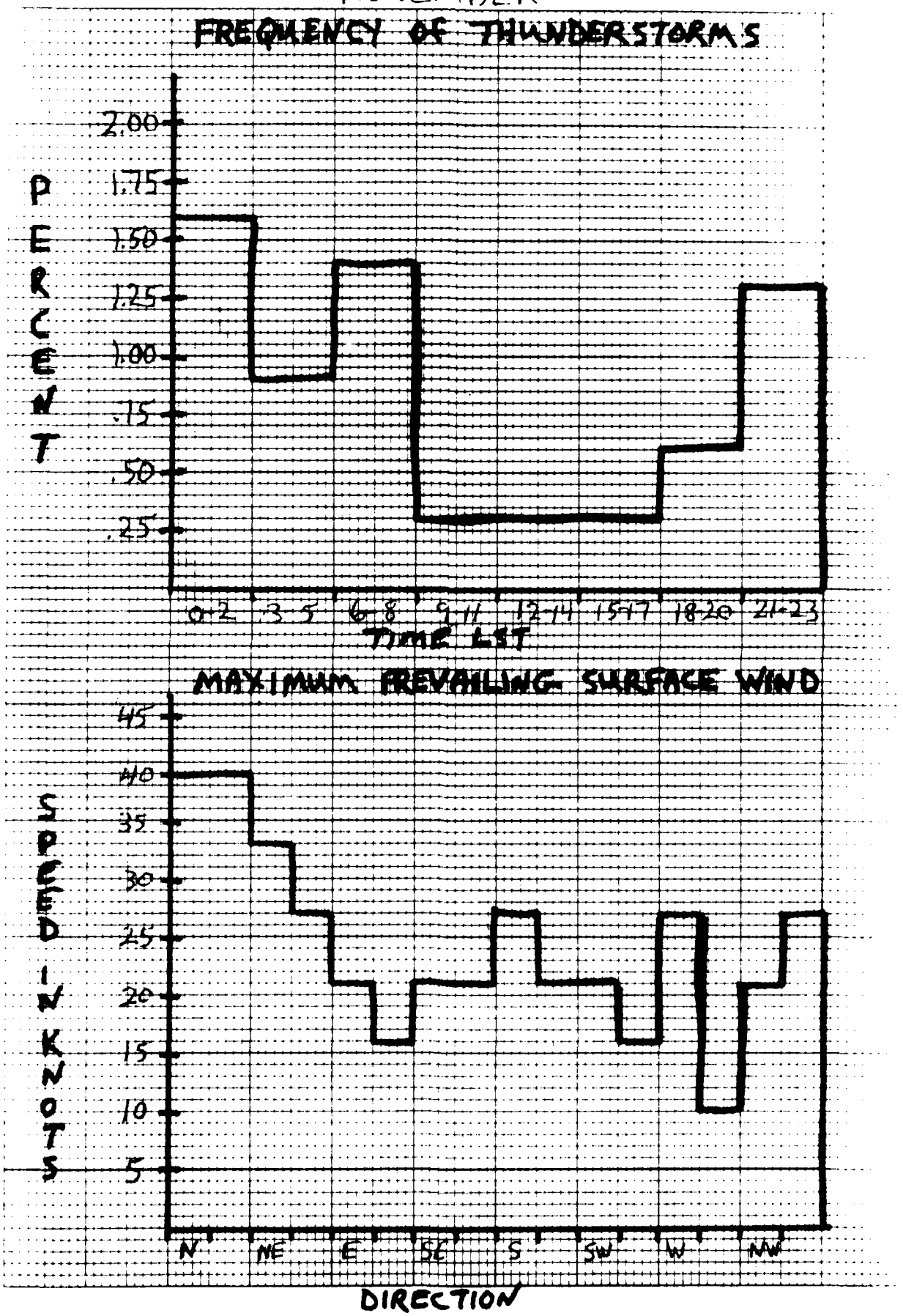
SEPTEMBER


FREQUENCY OF THUNDERSTORMS
PERCENT
2.00
1.75
1.50
1.25
1.00
.75
.50
.25
0-2
3-5
6-8
9-11
12-14
15-17
18-20
21-23
TIME EST
MAXIMUM PREVAILING SURFACE WIND
SPEED IN KNOTS
45
40
35
30
25
20
15
10
5
N
NE
E
SE
S
SW
W
NW
DIRECTION

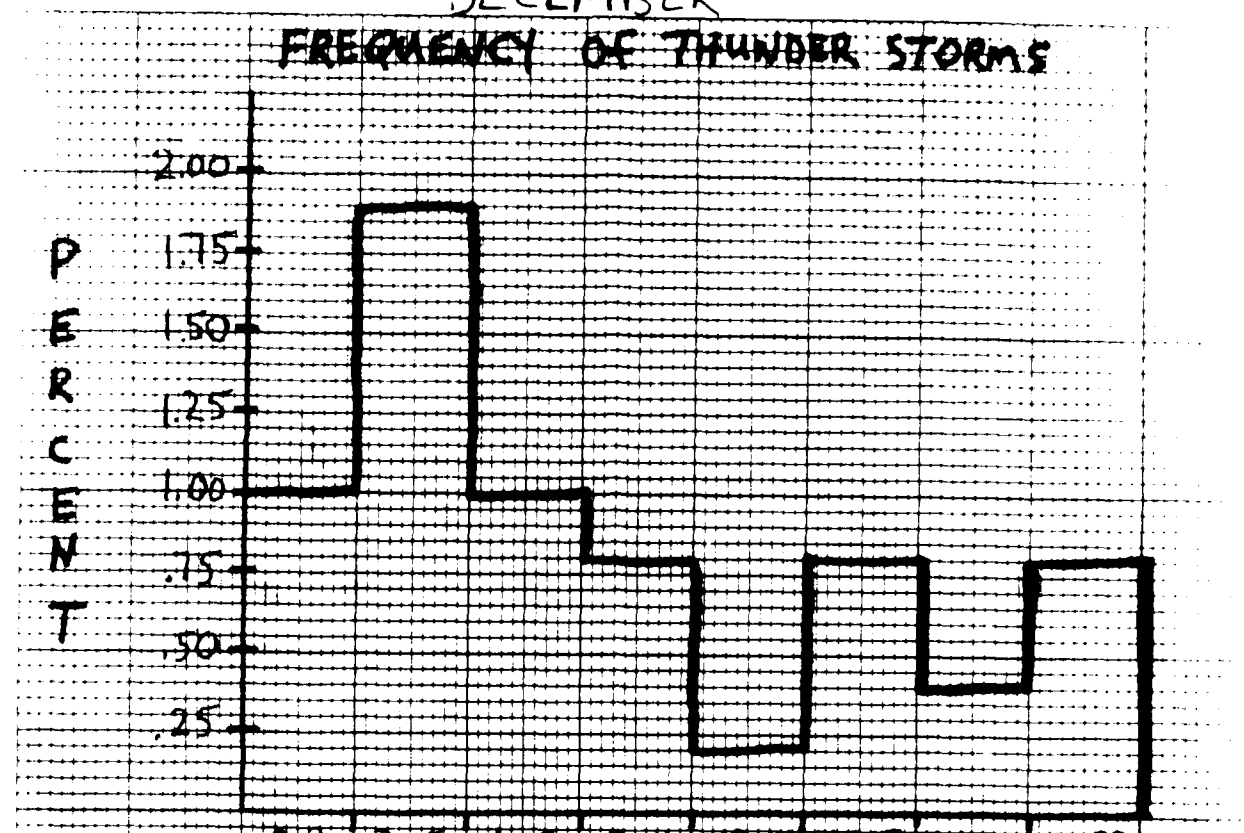
OCTOBER

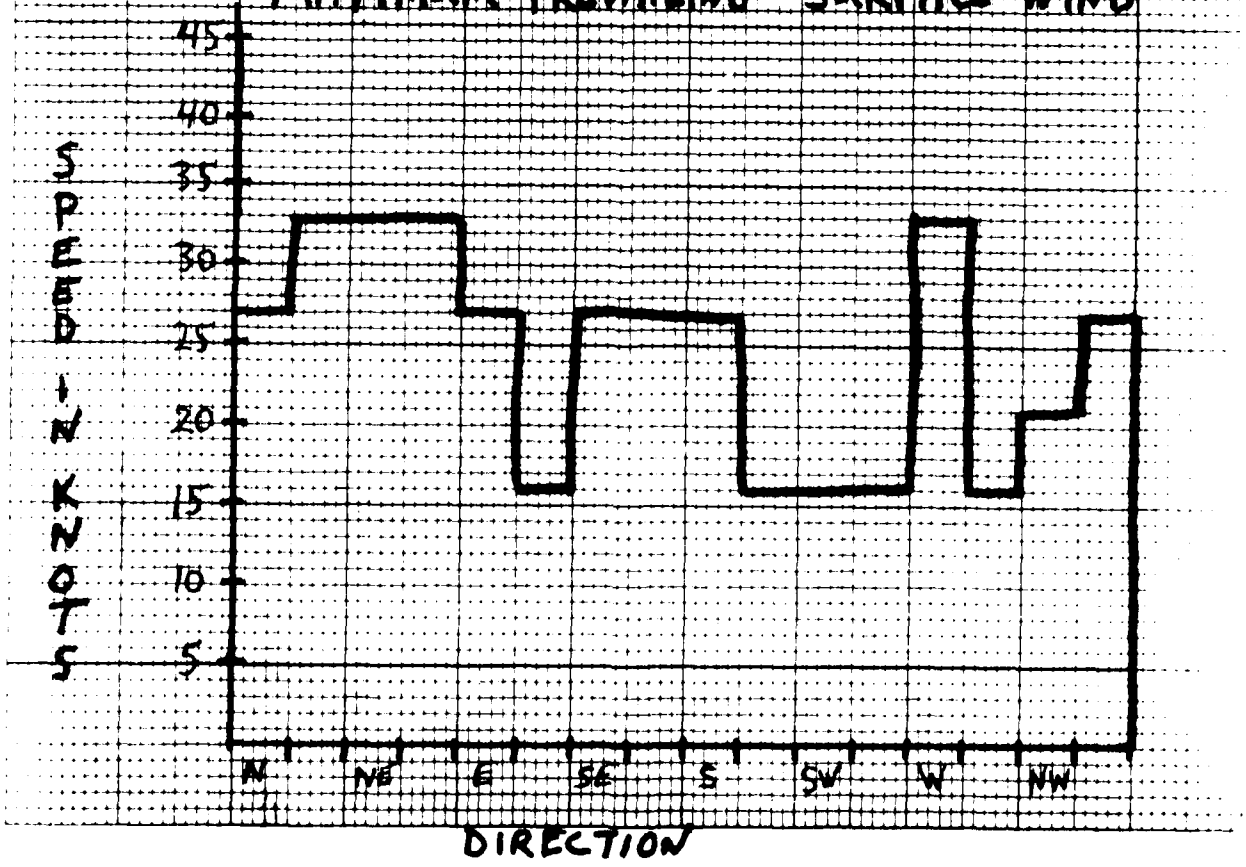

FREQUENCY OF THUNDERSTORMS
PERCENT
2.00
1.75
1.50
1.25
1.00
.75
.50
.25
0-2
3-5
6-8
9-11
12-14
15-17
18-20
21-23
TIME LST
MAXIMUM PREVAILING SURFACE WIND
SPEED IN KNOTS
45
40
35
30
25
20
15
10
5
N
NE
E
SE
S
SW
W
NW
DIRECTION

NOVEMBER


FREQUENCY OF THUNDERSTORMS
PERCENT
2.00
1.75
1.50
1.25
1.00
.75
.50
.25
0-2
3-5
6-8
9-11
12-14
15-17
18-20
21-23
TIME LST
MAXIMUM PREVAILING SURFACE WIND
SPEED IN KNOTS
45
40
35
30
25
20
15
10
5
N
NE
E
SE
S
SW
W
NW
DIRECTION

DECEMBER

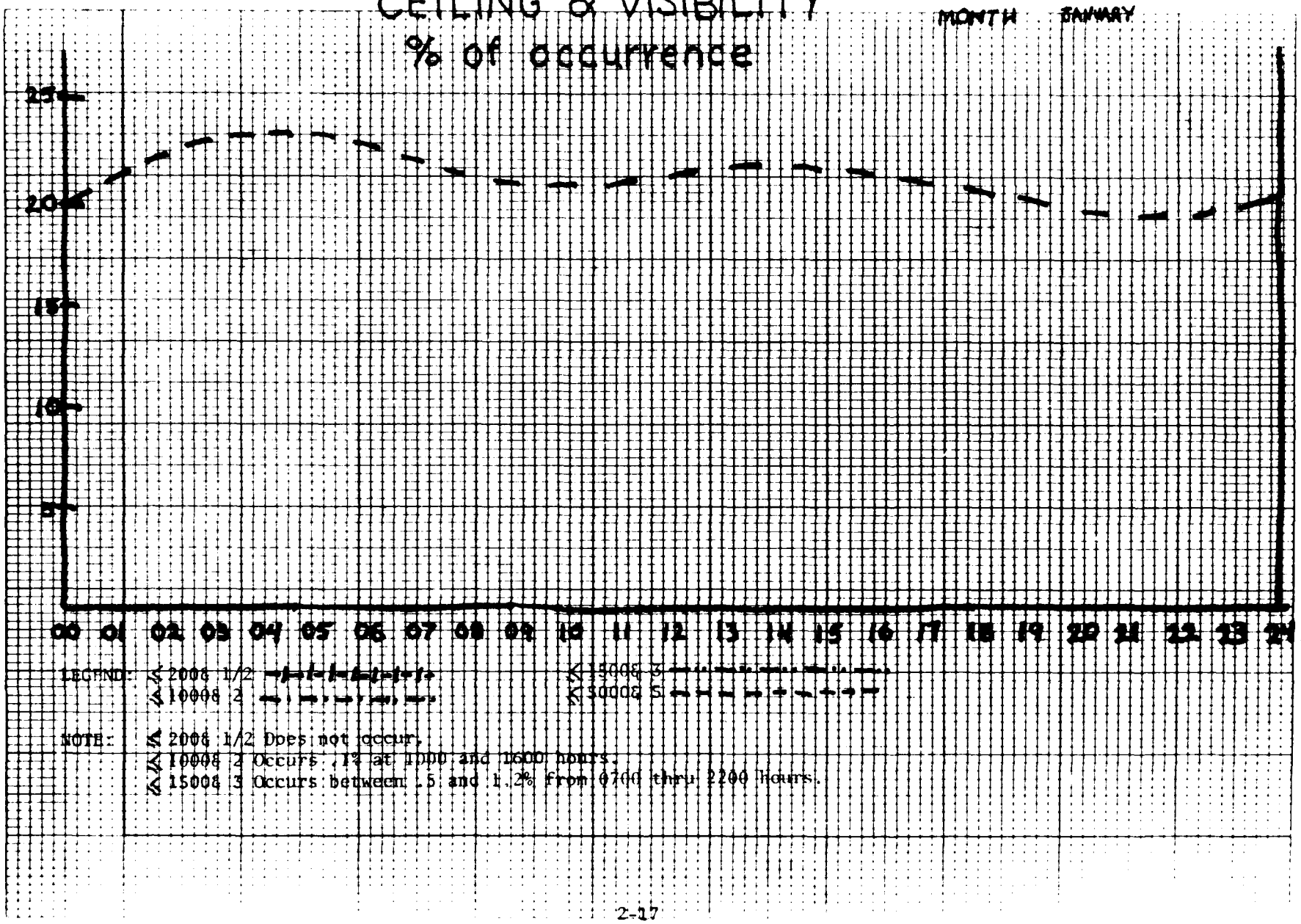

FREQUENCY OF THUNDER STORMS
PERCENT
2.00
1.75
1.50
1.25
1.00
.75
.50
.25
0-2
3-5
6-8
9-11
12-14
15-17
18-20
21-23
TIME LST


MAXIMUM PREVAILING SURFACE WIND
SPEED IN KNOTS
45
40
35
30
25
20
15
10
5
N
NE
E
SE
S
SW
W
NW
DIRECTION

CEILING & VISIBILITY

% of occurrence

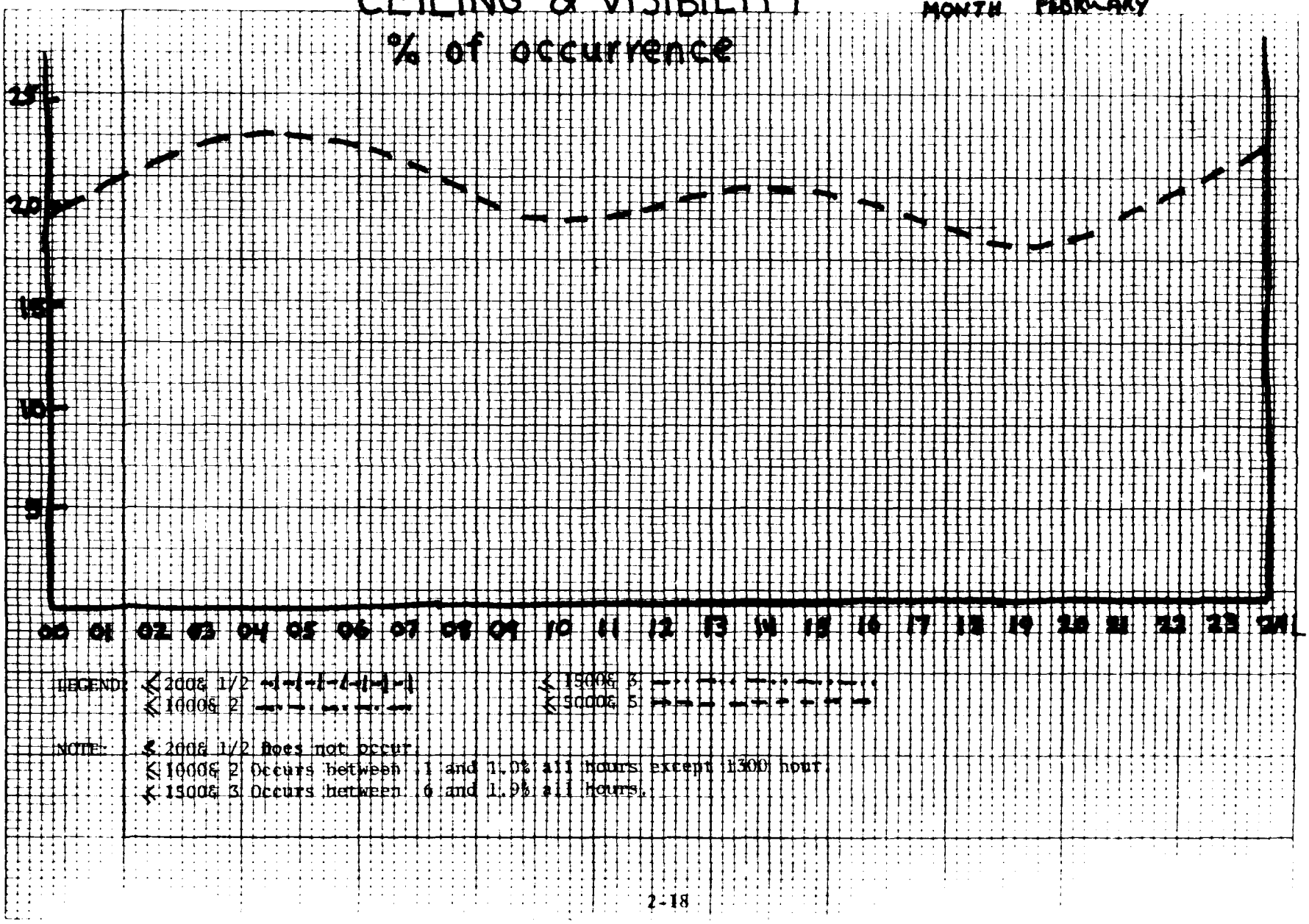
MONTH JANUARY



NOTE: ≤ 2000 1/2 Does not occur.
≤ 10000 2 Occurs .1% at 1000 and 1600 hours.
≤ 15000 3 Occurs between .5 and 1.2% from 0700 thru 2200 hours.

CEILING & VISIBILITY

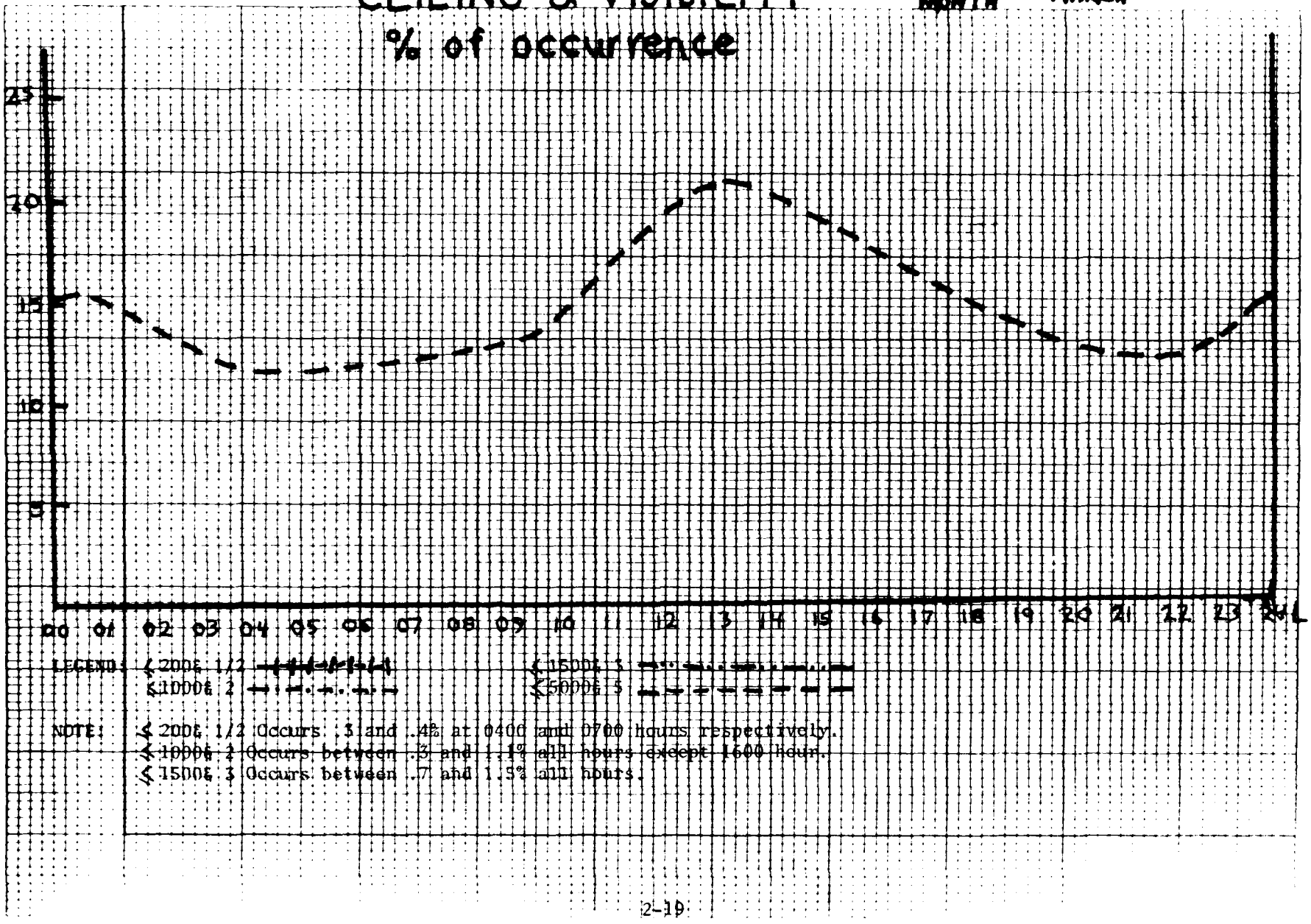
MONTH FEBRUARY



NOTE: ≤ 200& 1/2 does not occur.
≤ 1000& 2 Occurs between .1 and 1.0% all hours except 1300 hour.
≤ 1500& 3 Occurs between .6 and 1.9% all hours.

CEILING & VISIBILITY

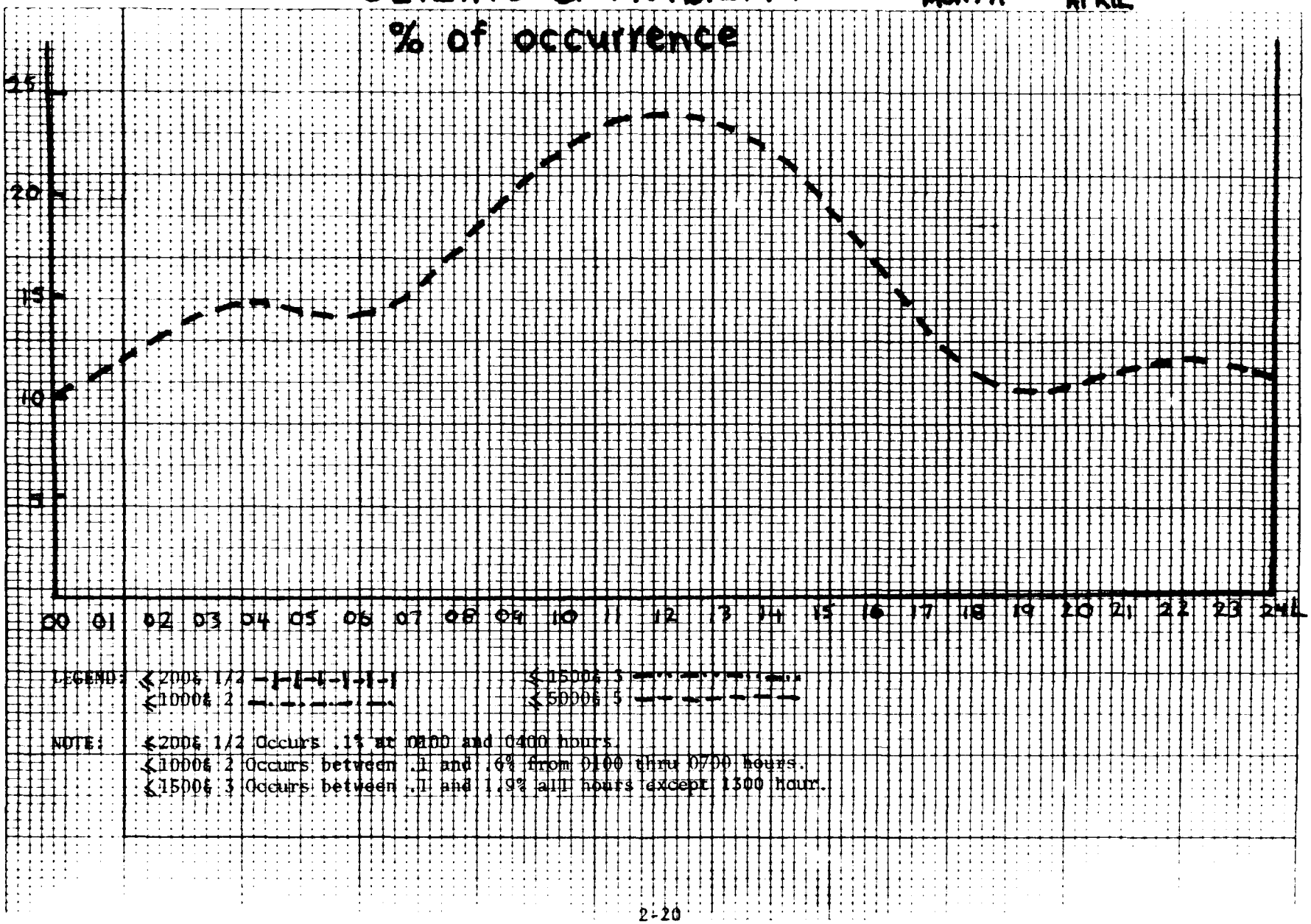
MONTH MARCH



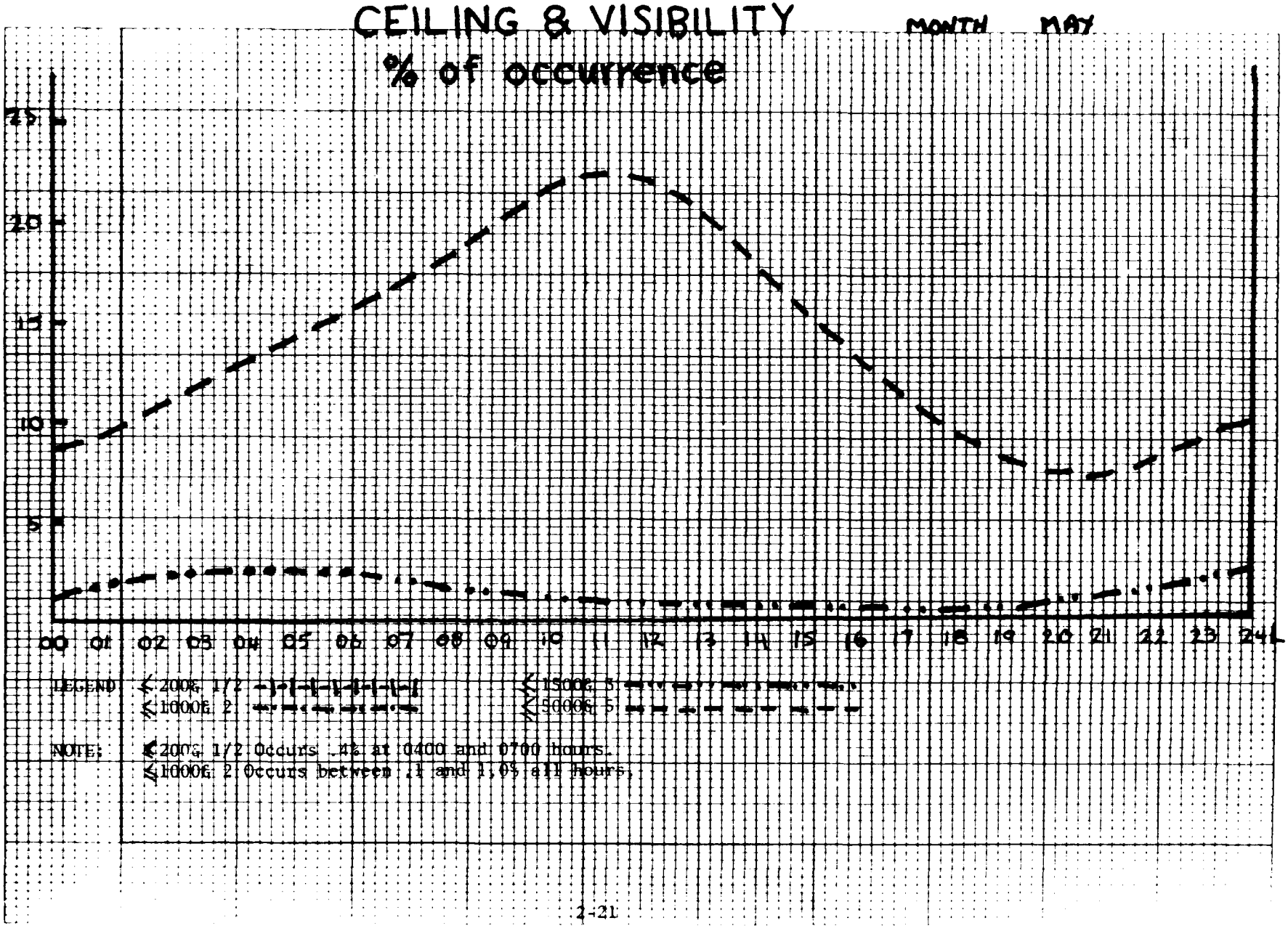
NOTE: ≤ 200ft 1/2 Occurs .3 and .4% at 0400 and 0700 hours respectively.
≤ 1000ft 2 Occurs between .3 and 1.1% all hours except 1600 hour.
≤ 1500ft 3 Occurs between .7 and 1.5% all hours.

CEILING & VISIBILITY

MONTH APRIL

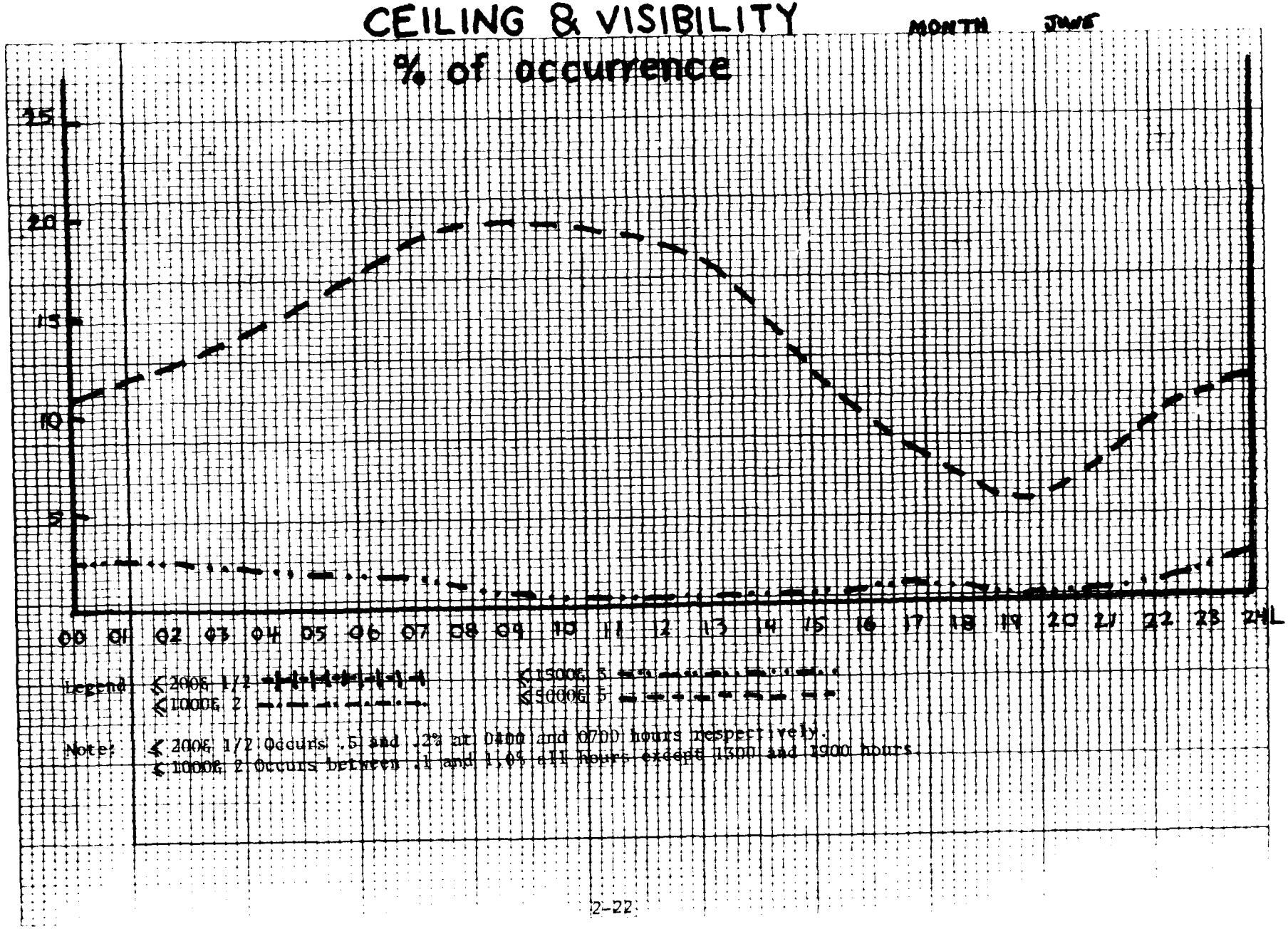


NOTE: ≤200ft 1/2 Occurs .1% at 0300 and 0400 hours.
≤1000ft 2 Occurs between .1 and .6% from 0100 thru 0700 hours.
≤1500ft 3 Occurs between .1 and 1.9% all hours except 1500 hour.


CEILING & VISIBILITY
MONTH MAY
% of occurrence
25
20
15
10
5
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
LEGEND
≤ 200ft 1/2
≤ 1000ft 2
≤ 1500ft 3
≤ 5000ft 5
NOTE:
≤200ft 1/2 Occurs .4% at 0400 and 0700 hours.
≤1000ft 2 Occurs between .1 and 1.0% all hours.

CEILING & VISIBILITY

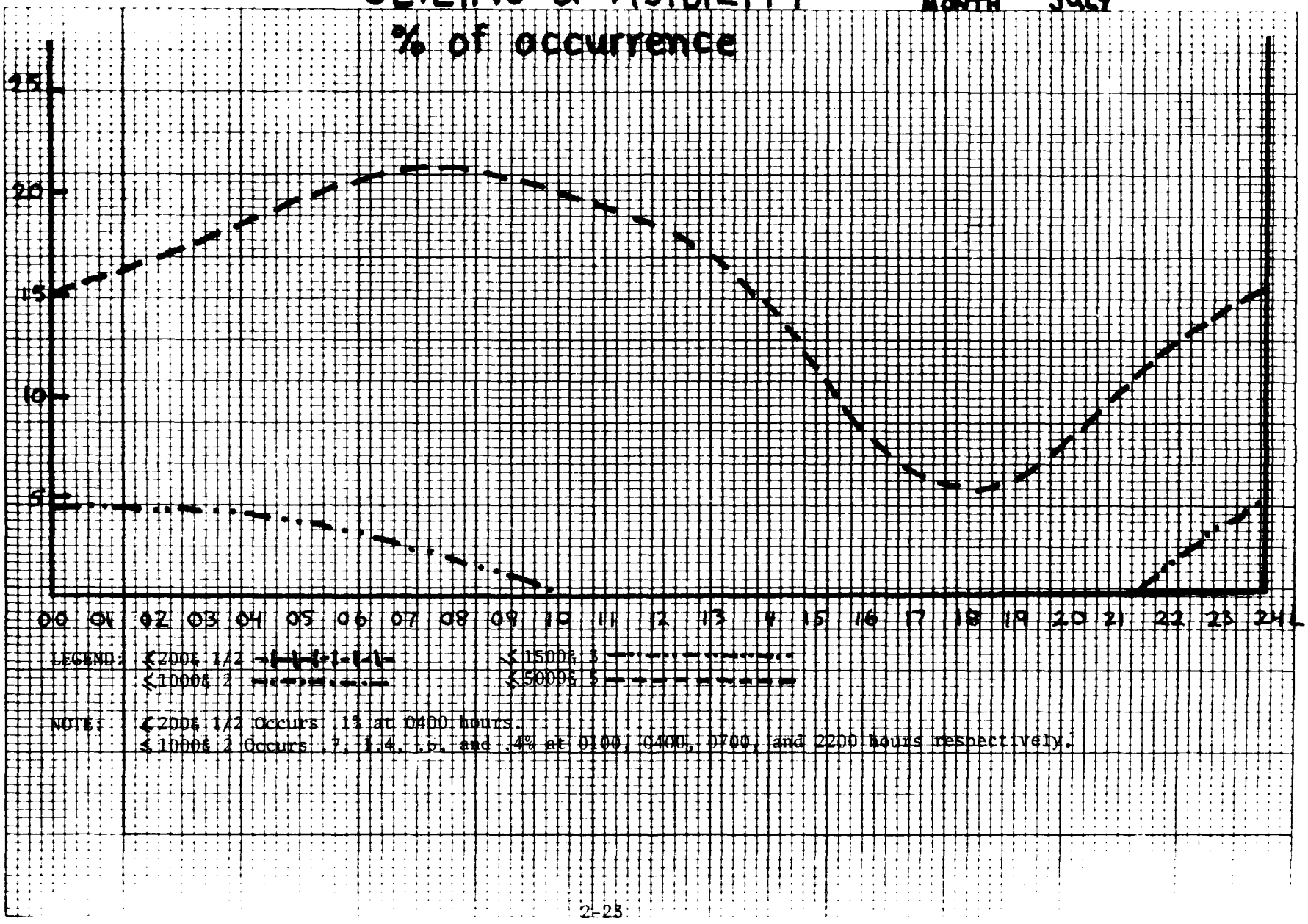
MONTH JUNE



Note: ≤ 2000ft 1/2 Occurs .5 and .2% at 0400 and 0700 hours respectively.
≤ 10000ft 2 Occurs between .1 and 1.0% all hours except 1300 and 1900 hours.

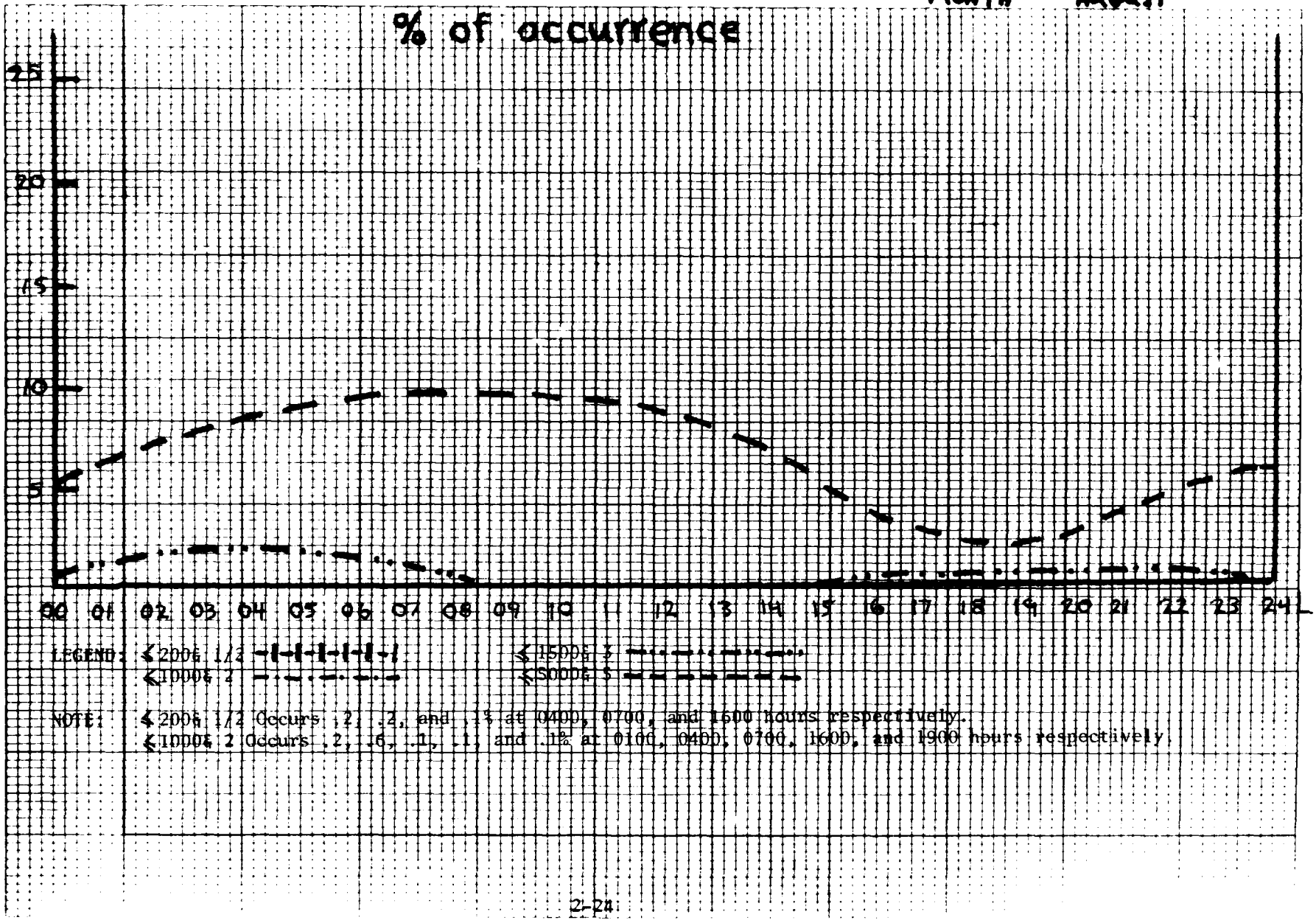
CEILING & VISIBILITY

MONTH JULY



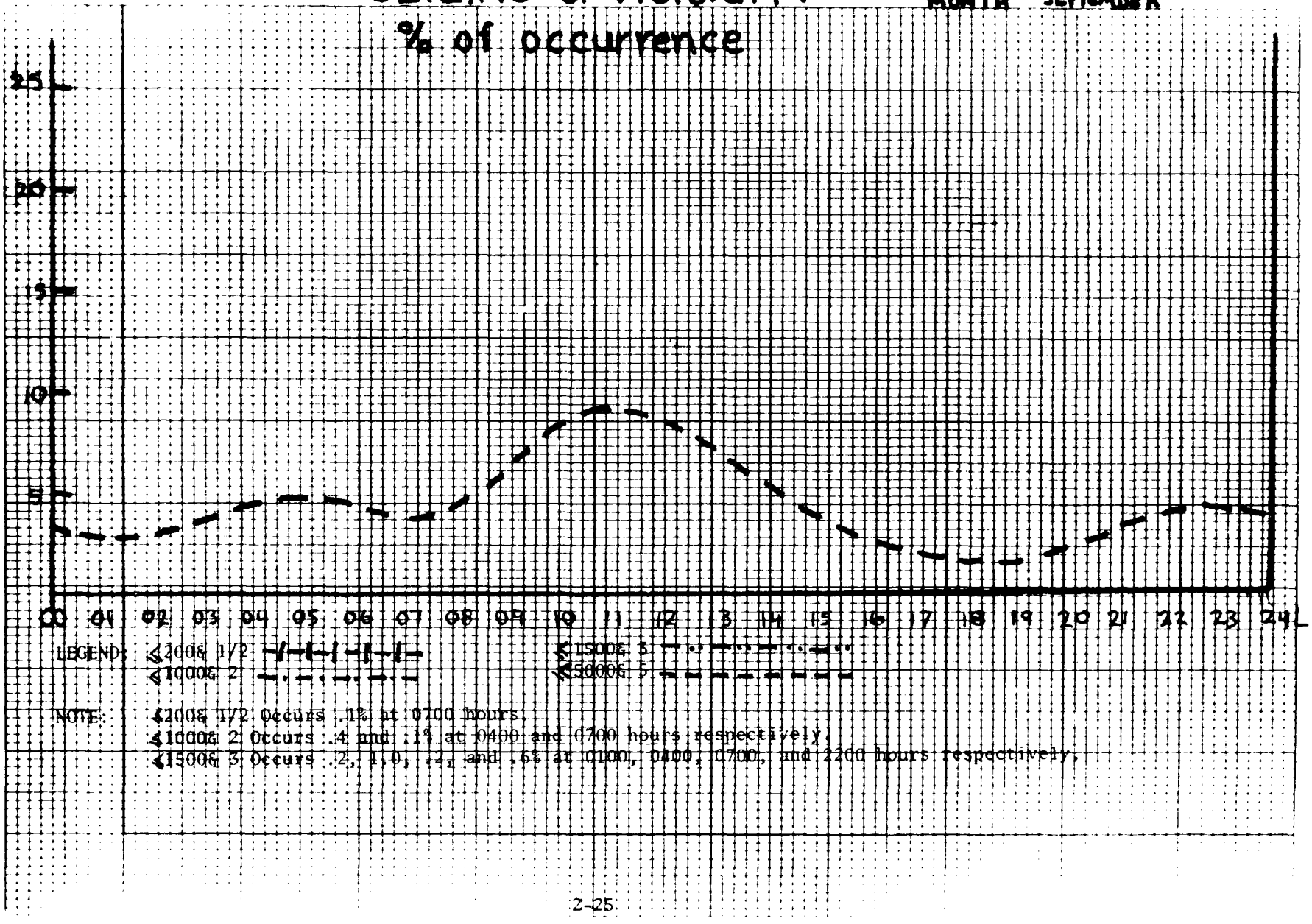
CEILING & VISIBILITY

MONTH AUGUST



CEILING & VISIBILITY

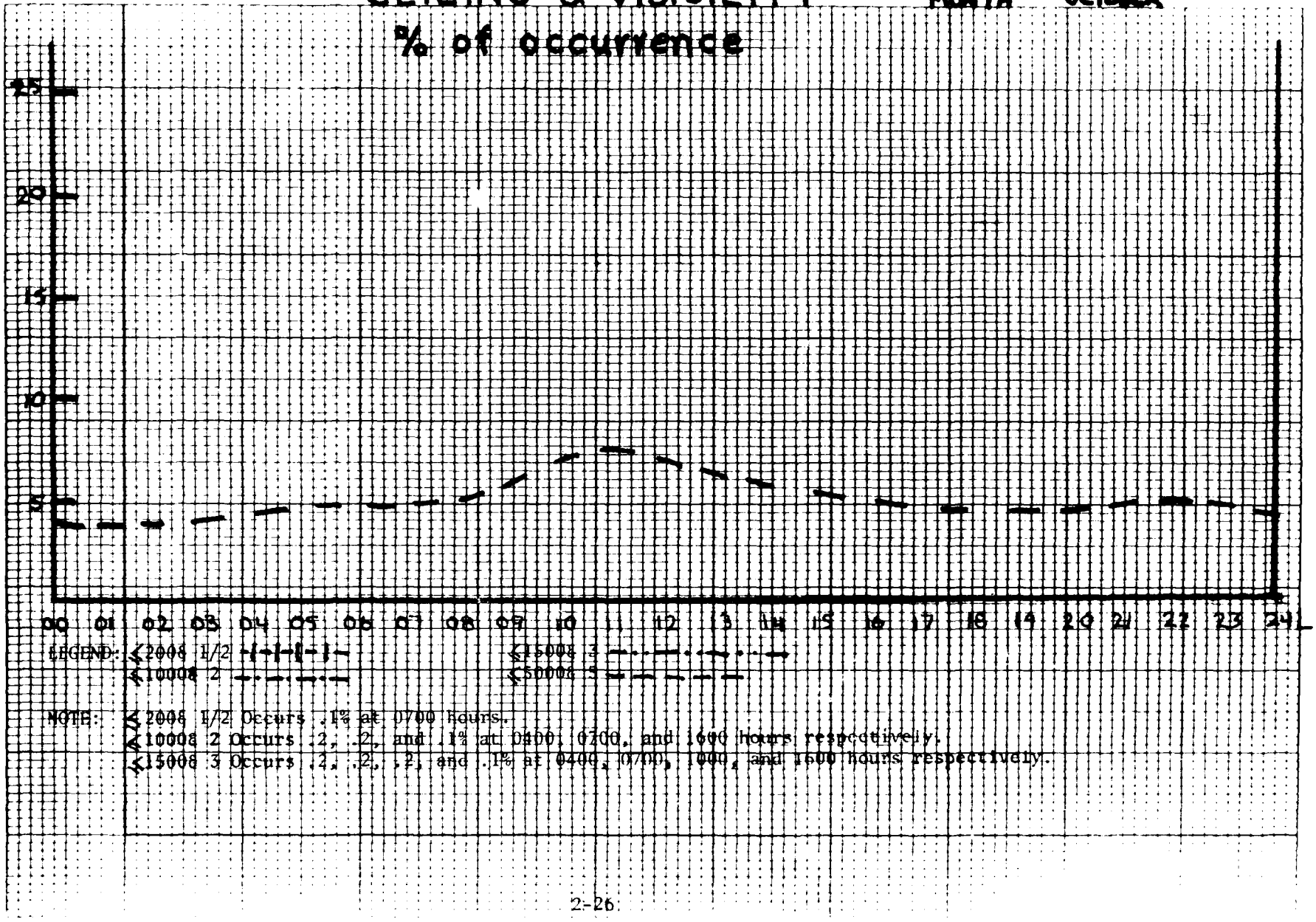
MONTH SEPTEMBER



NOTE: ≤2006 1/2 Occurs .1% at 0700 hours.
≤10006 2 Occurs .4 and .1% at 0400 and 0700 hours respectively.
≤15006 3 Occurs .2, .1, 0, .2, and .6% at 0100, 0400, 0700, and 2200 hours respectively.

CEILING & VISIBILITY

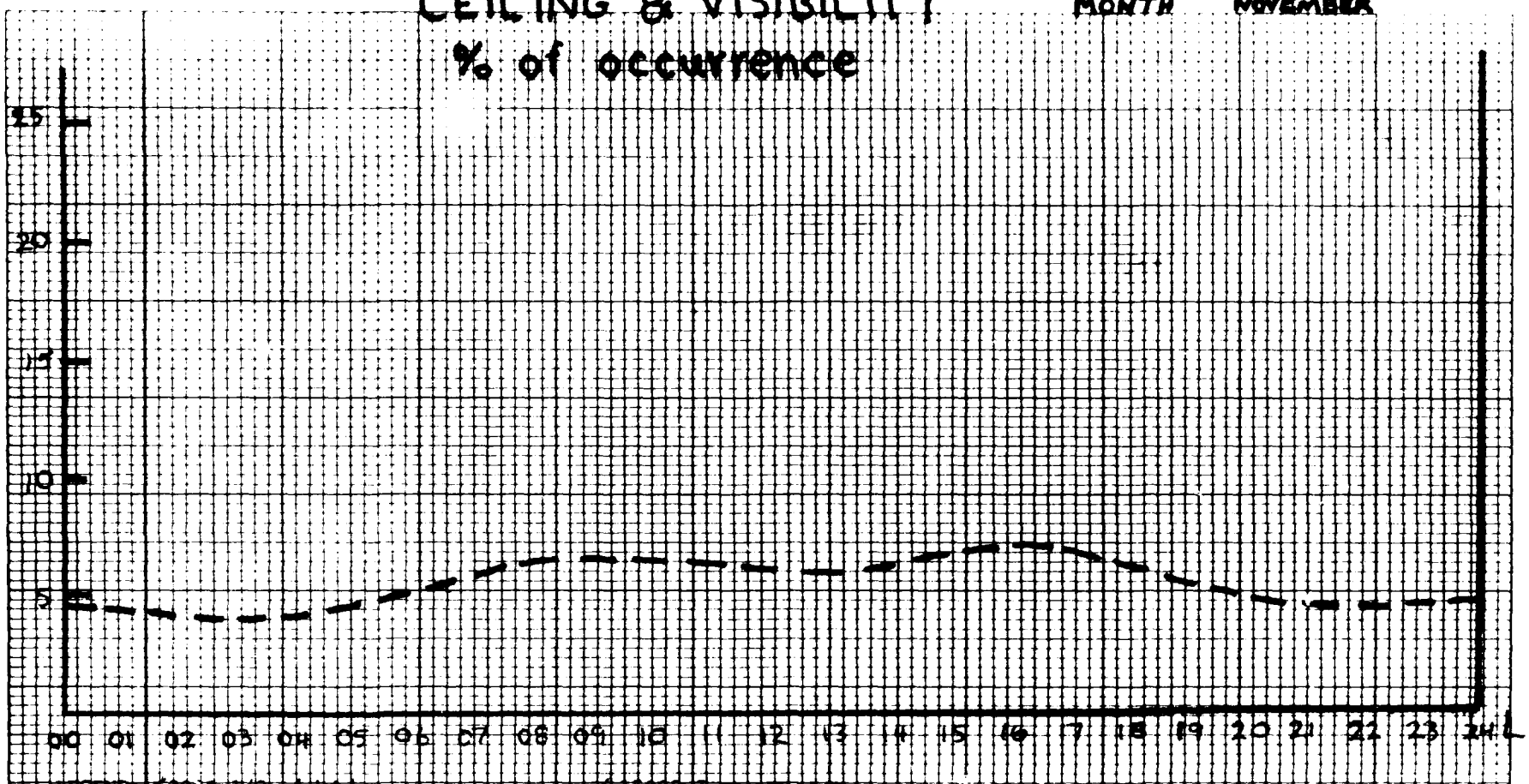
MONTH OCTOBER



CEILING & VISIBILITY

MONTH NOVEMBER

% of occurrence

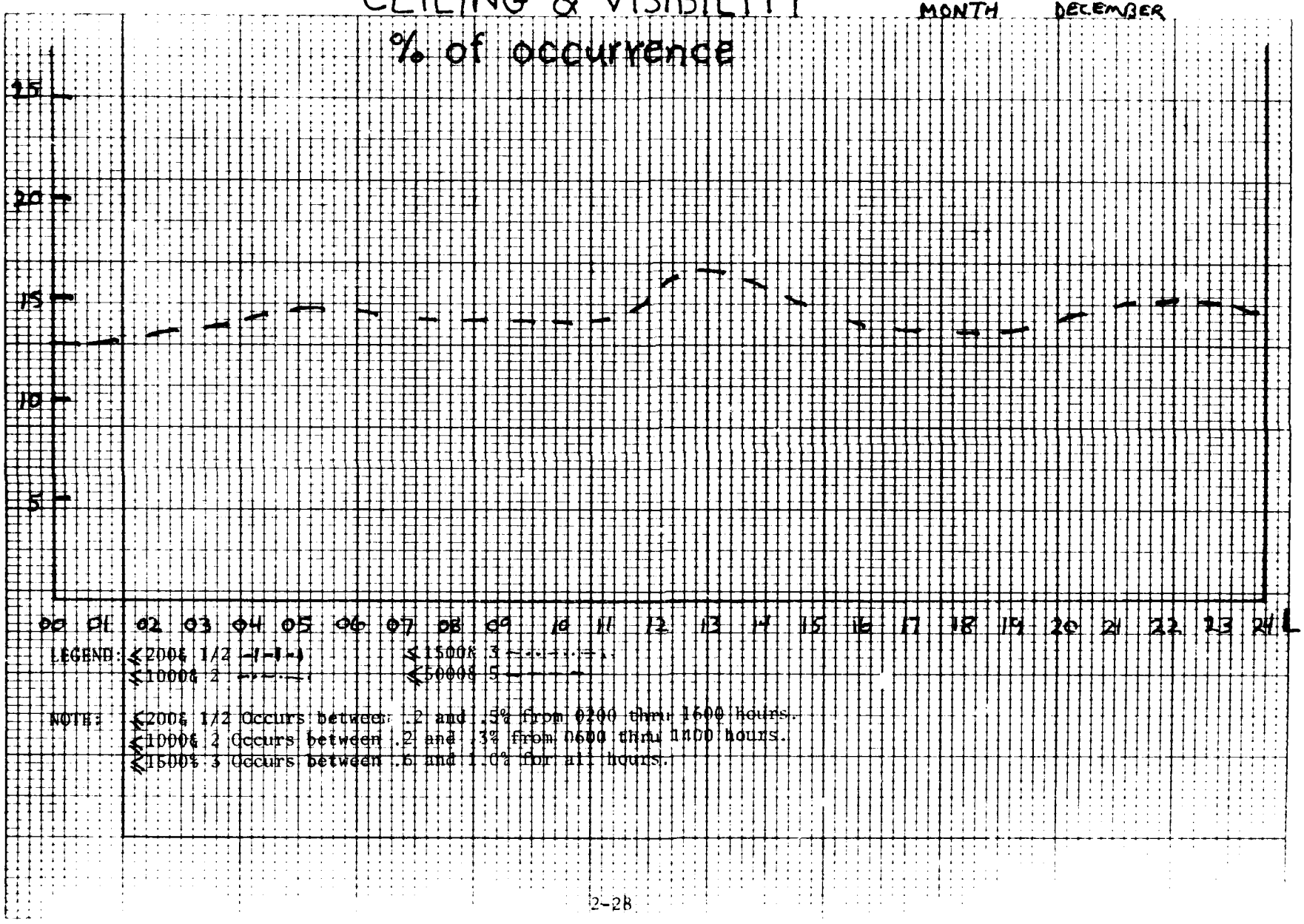


LEGEND: ≤200ft 1/2 ≤1000ft 2 ≤1500ft 3 ≤5000ft 5

NOTE: ≤200ft 1/2 Occurs between .1 and .4% from 0700 thru 1900 hours.
≤1000ft 2 Occurs between .3 and .4% for all hours.
≤1500ft 3 Occurs between .4 and .8% for all hours.

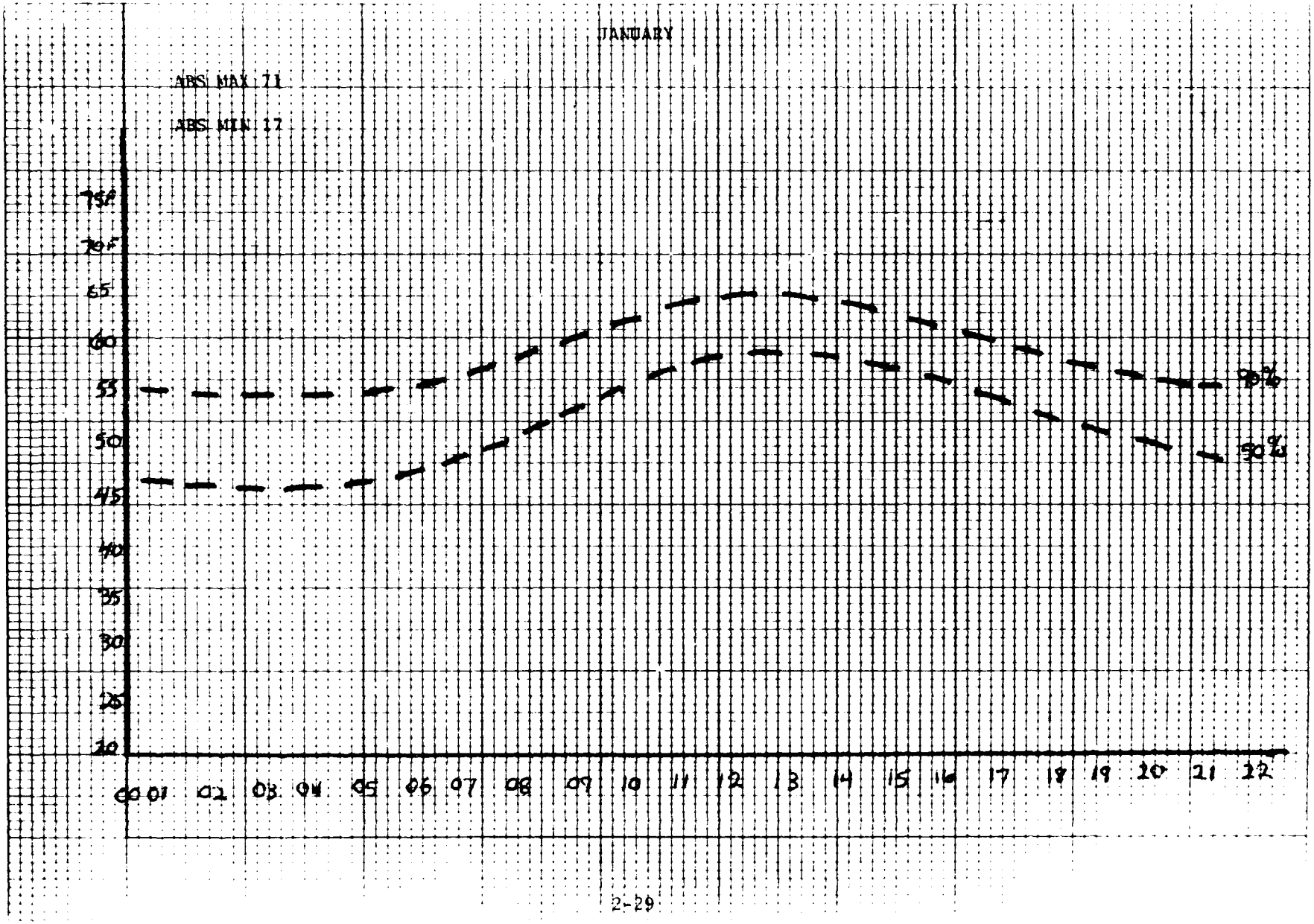
CEILING & VISIBILITY

MONTH DECEMBER

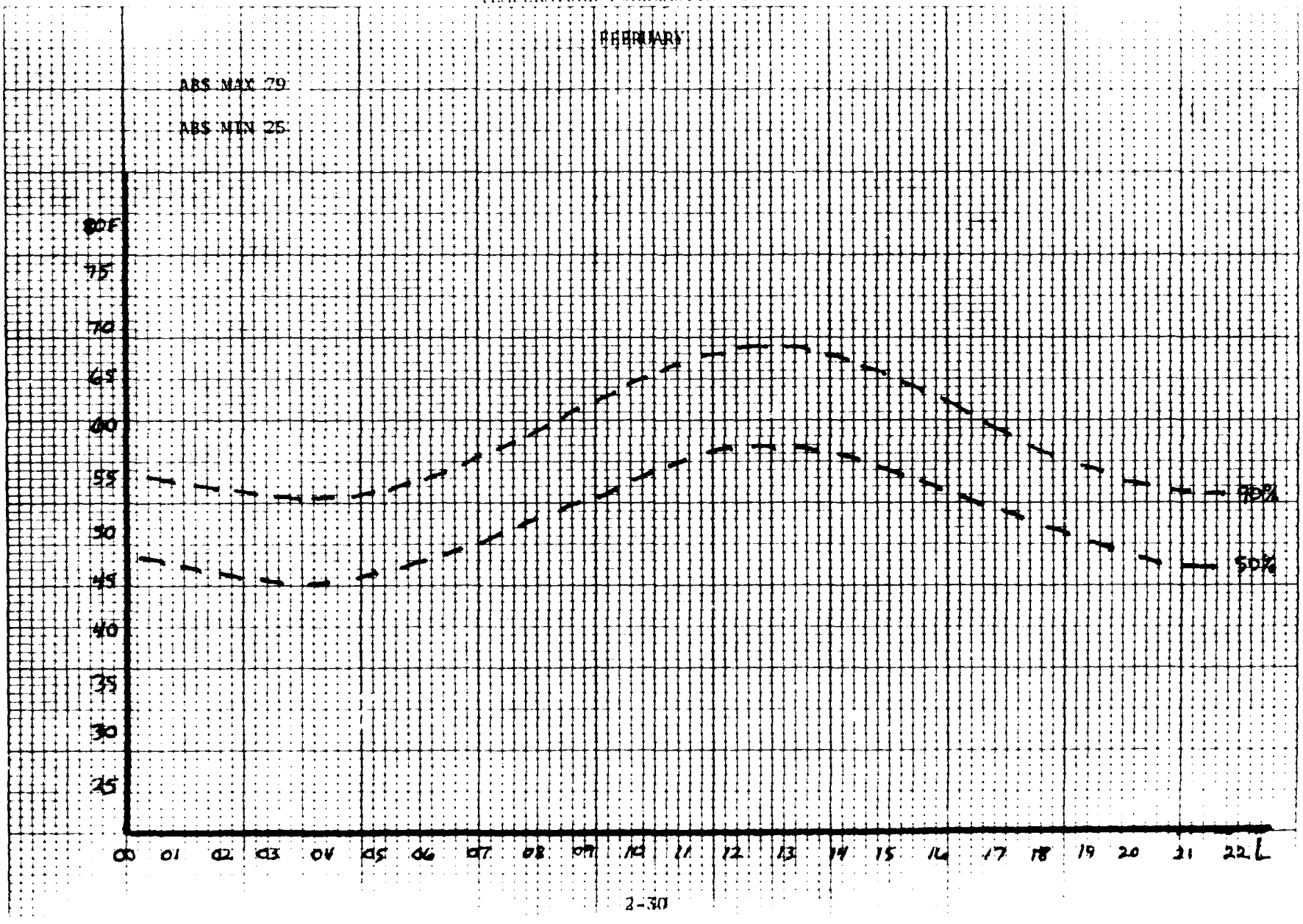


NOTE: ≤2000ft 1/2 Occurs between .2 and .5% from 0200 thru 1600 hours.
≤10000ft 2 Occurs between .2 and .3% from 0600 thru 1100 hours.
≤15000ft 3 Occurs between .6 and 1.0% for all hours.

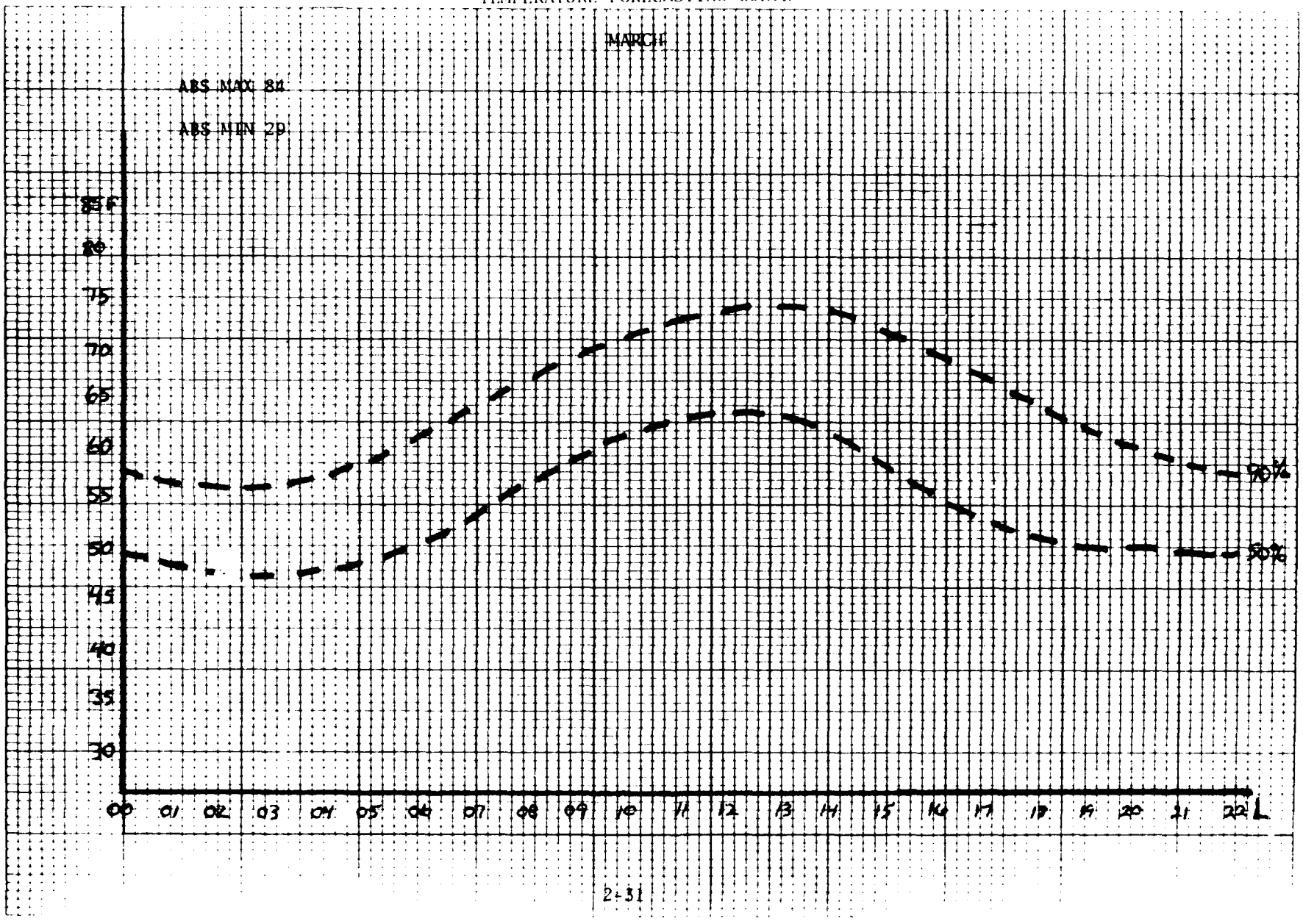
TEMPERATURE FORECASTING CURVE



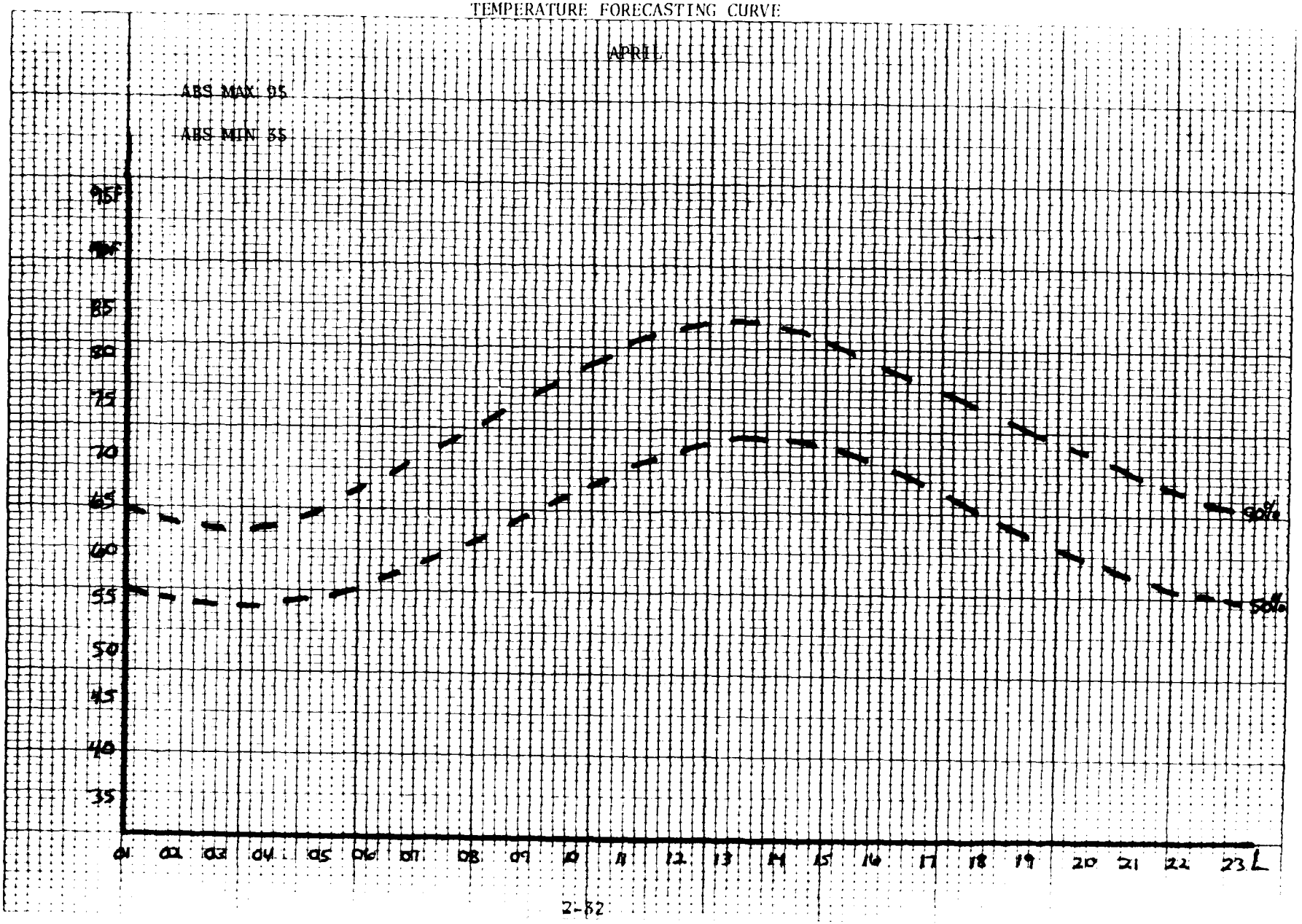
TEMPERATURE FORECASTING CURVE



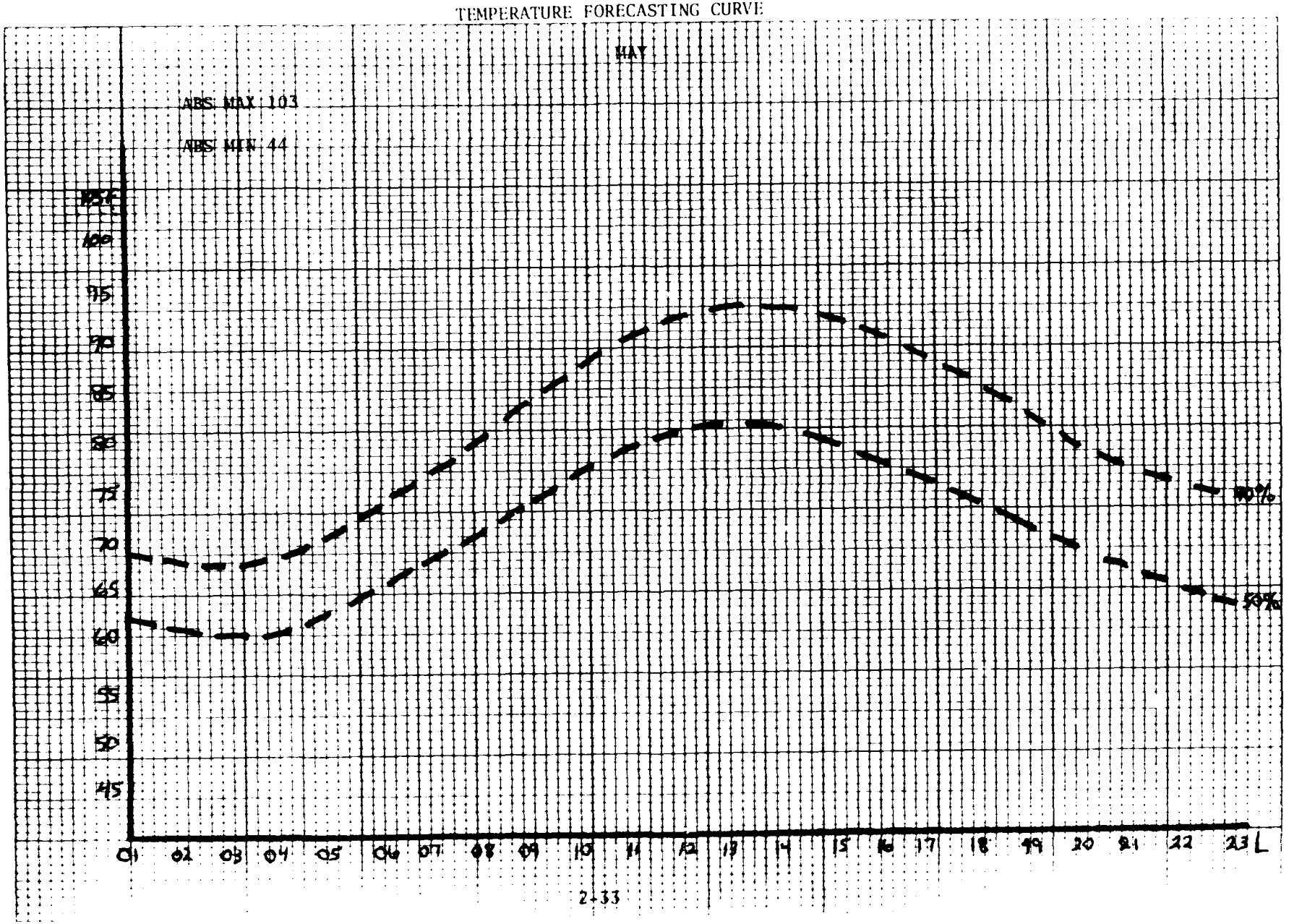
TEMPERATURE FORECASTING CURVE



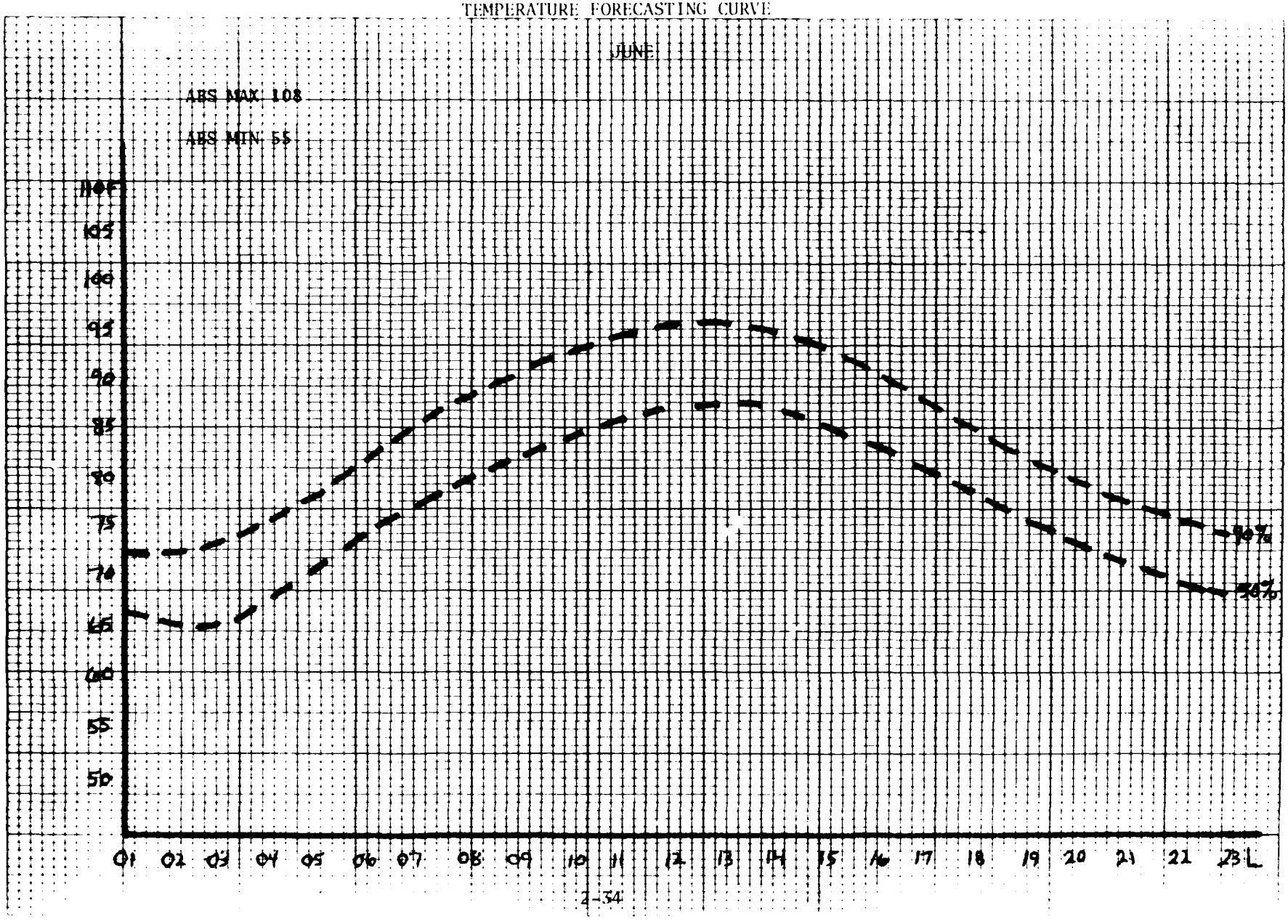
TEMPERATURE FORECASTING CURVE



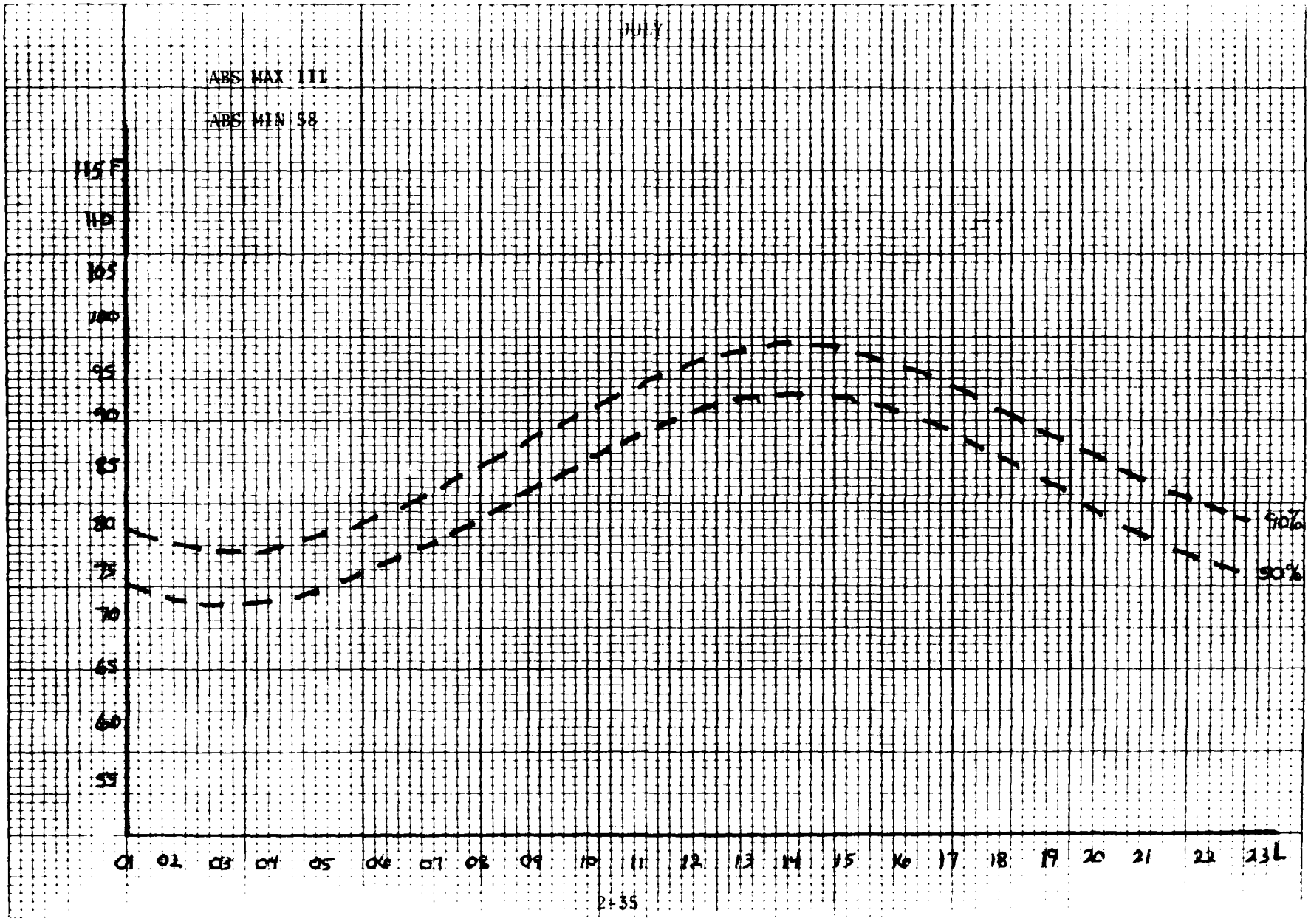
TEMPERATURE FORECASTING CURVE



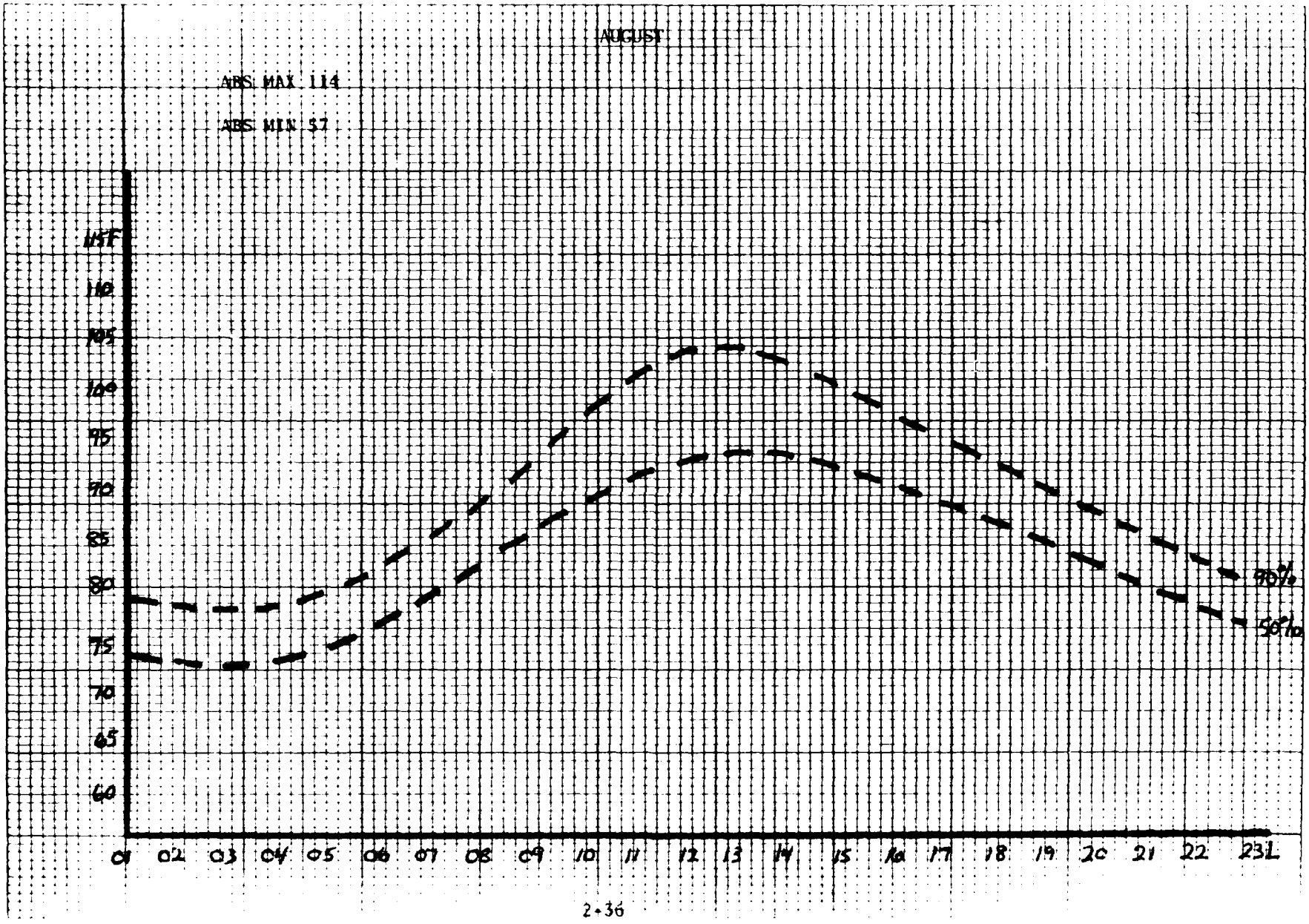
TEMPERATURE FORECASTING CURVE



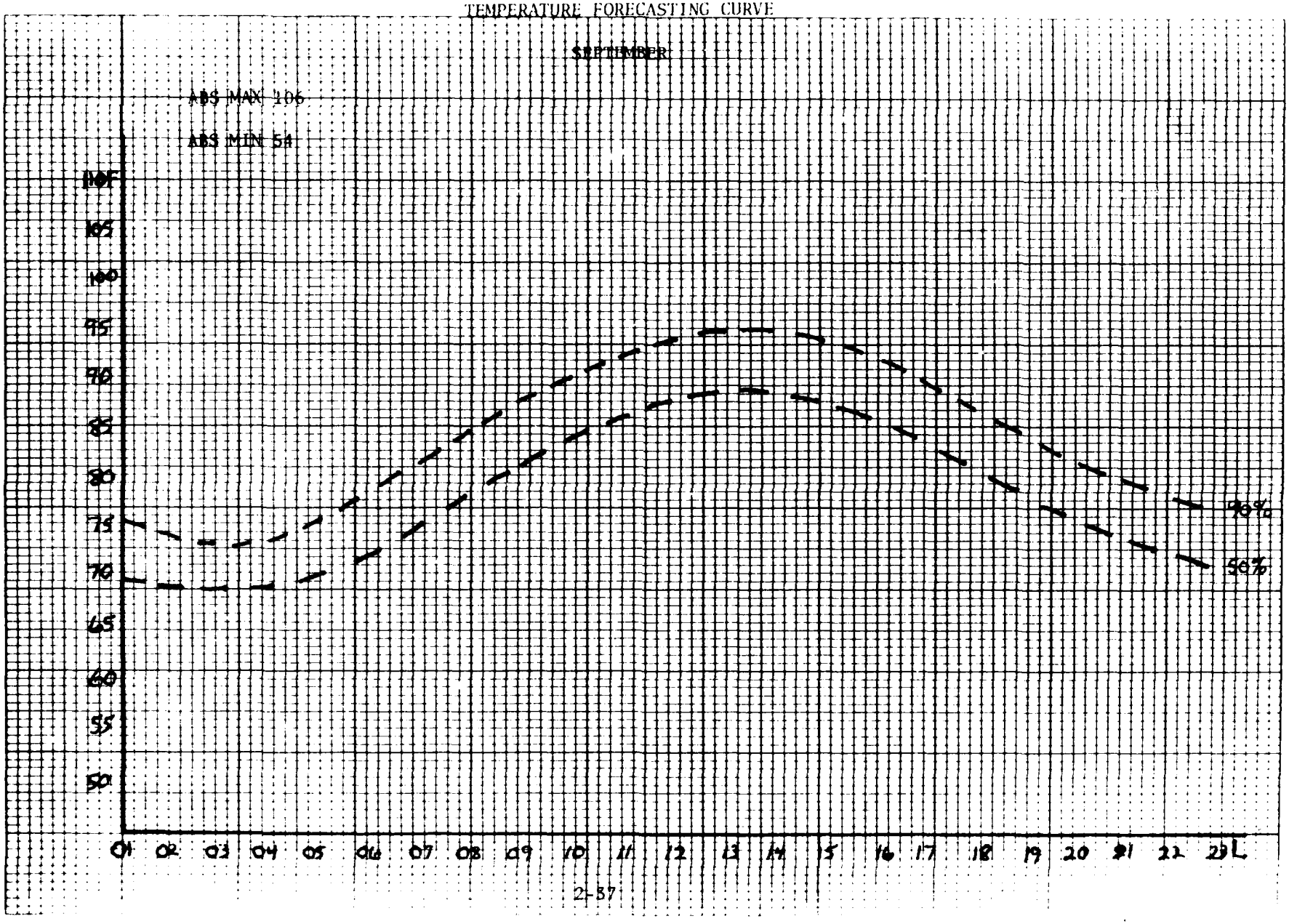
TEMPERATURE FORECASTING CURVE



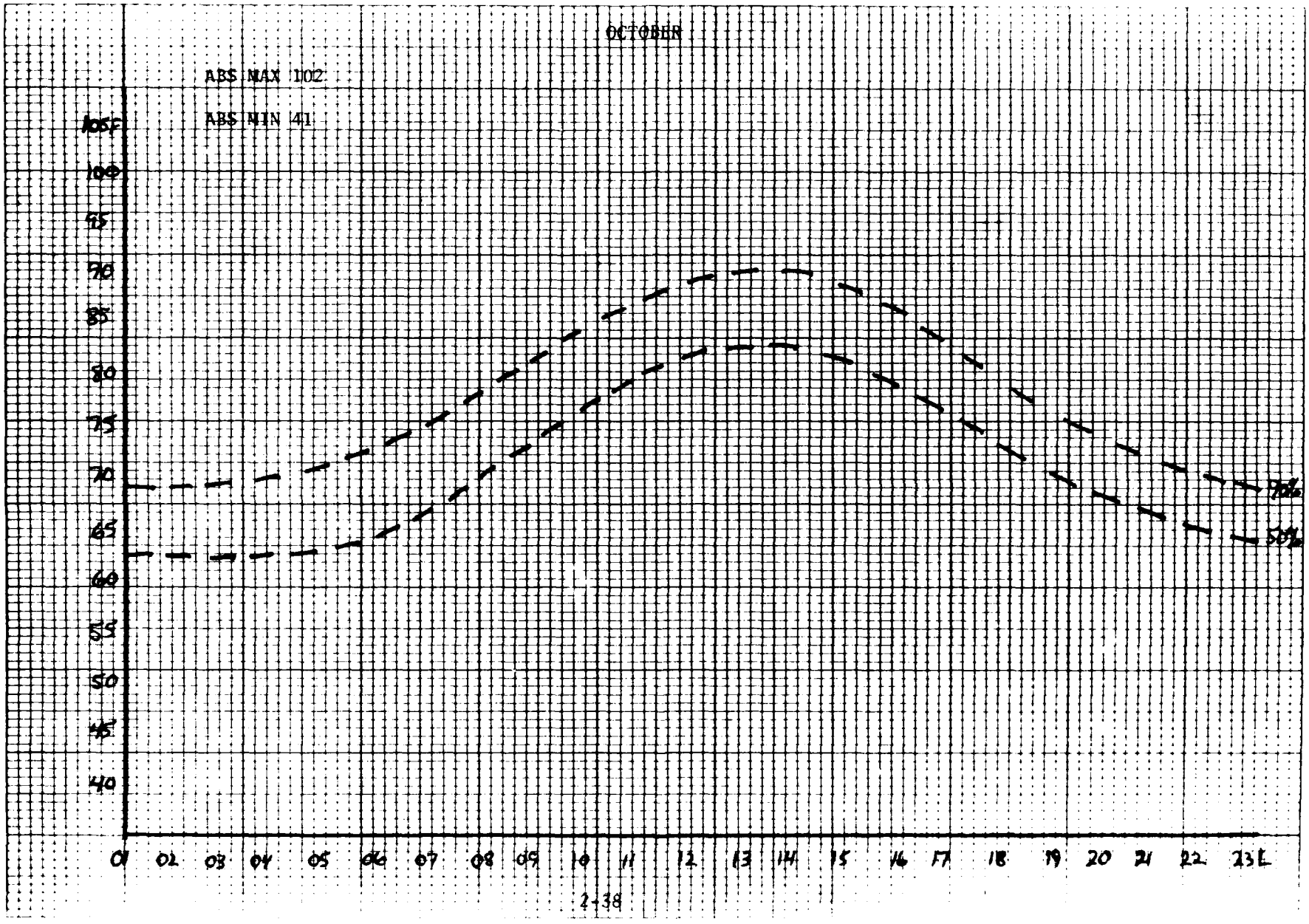
TEMPERATURE FORECASTING CURVE



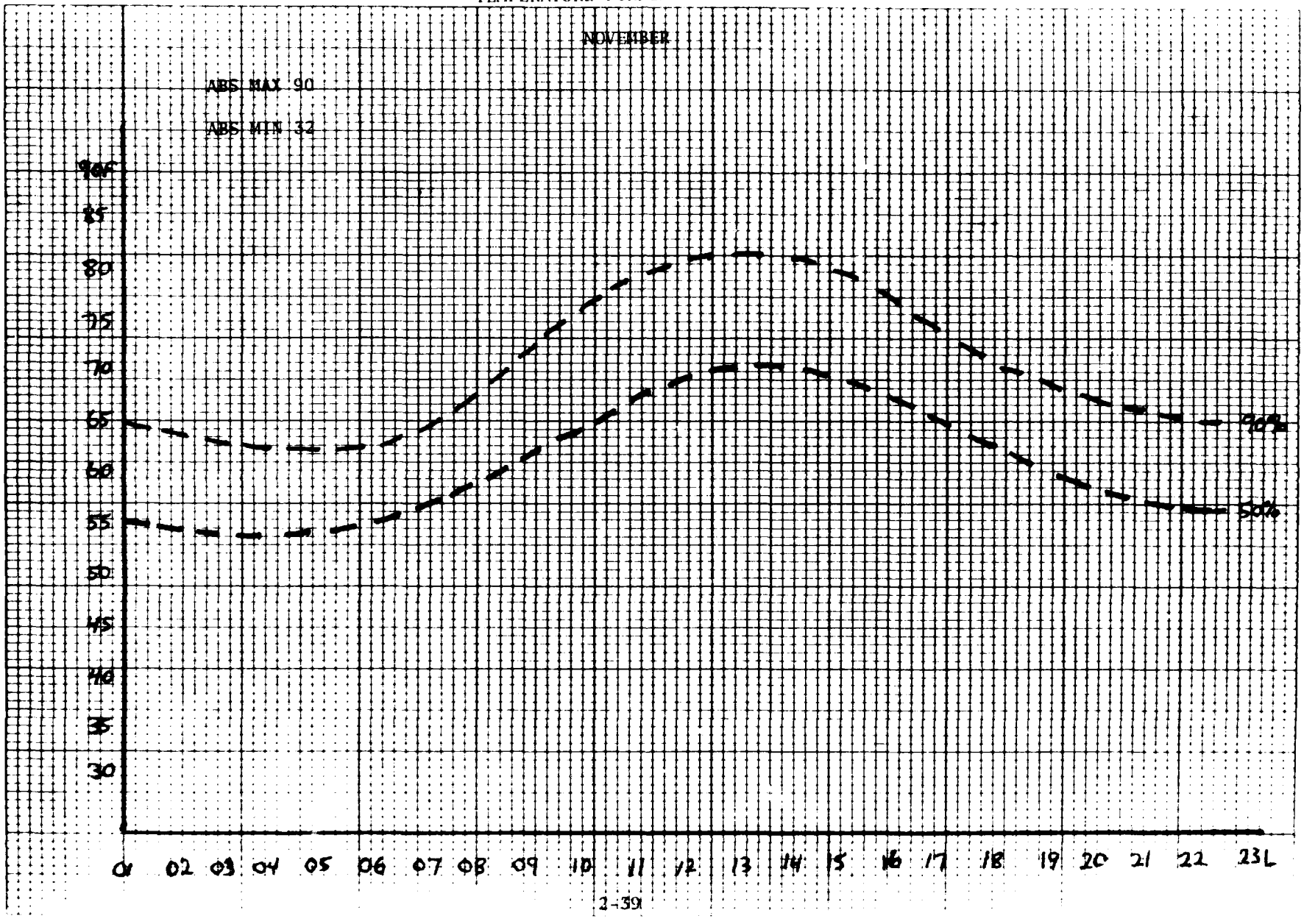
TEMPERATURE FORECASTING CURVE



TEMPERATURE FORECASTING CURVE

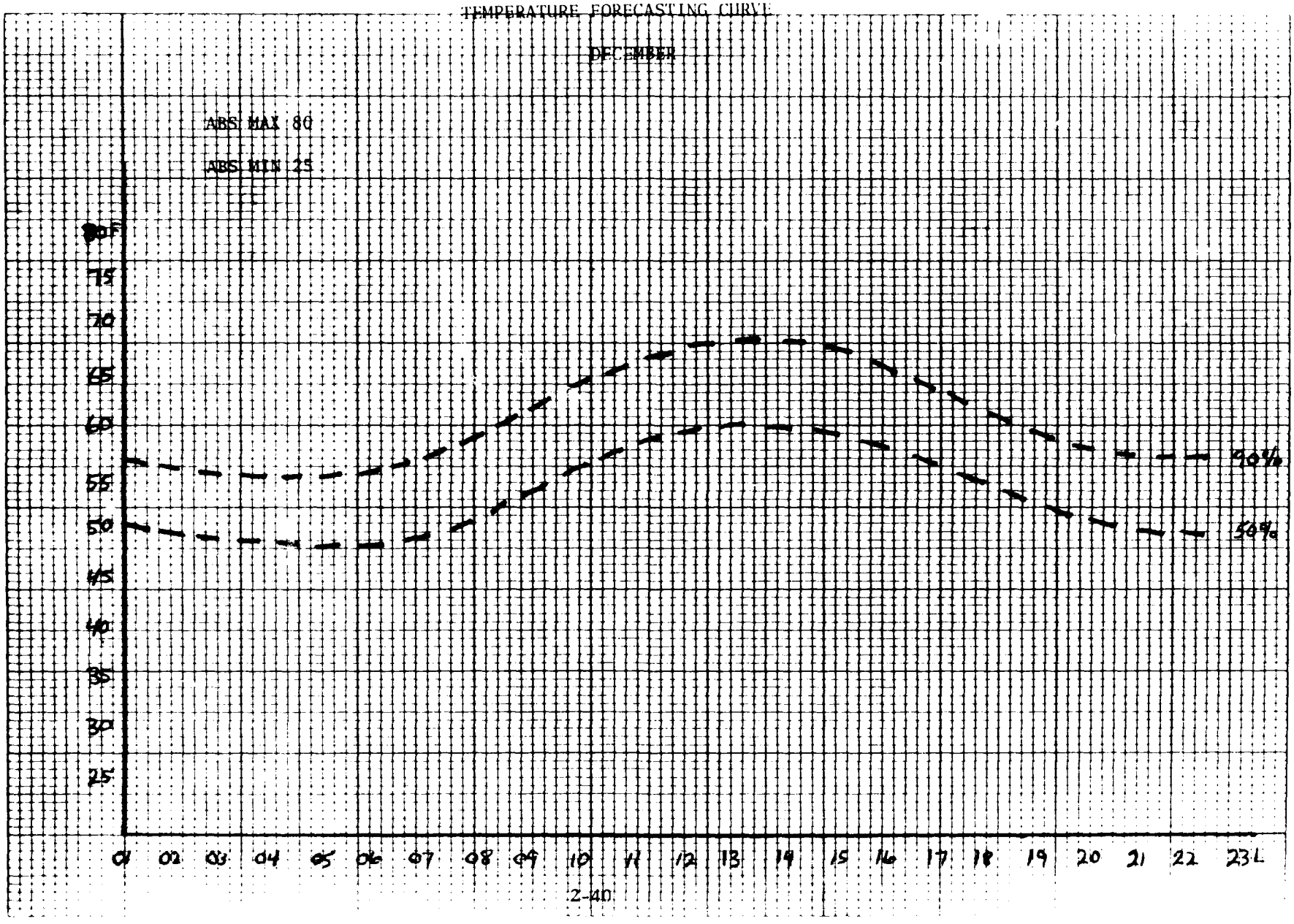


TEMPERATURE FORECASTING CURVE



TEMPERATURE FORECASTING CURVE

DECEMBER



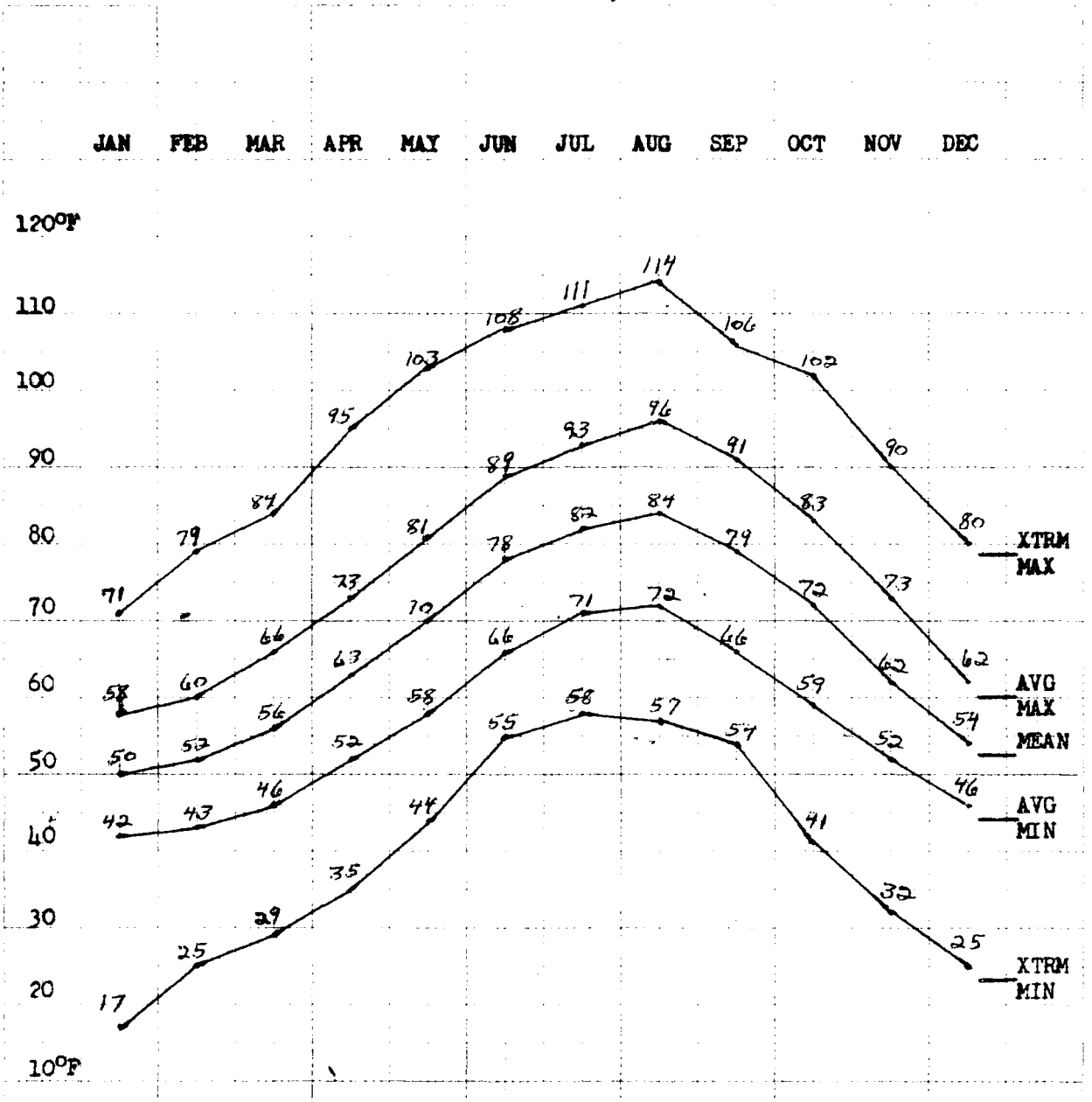
PERCENT FREQUENCY OF OCCURRENCE
OF CROSSWINDS OF INDICATED SPEEDS DURING
DRY AND WET WEATHER

INCIRLIK CDI

*Less Than 0.5 Percent

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
All Hours	08-12K	7	7	7	6	4	5	4	3	4	5	4	5
	13-16K	1	2	2	1	1	1	*	*	1	*	1	1
	17-20K	1	1	*	*	0	*	0	0	0	0	0	0
	≧ 21K	*	0	0	0	0	0	0	0	0	0	0	*
Rain	8-12K	1	1	1	1	1	*	0	0	0	*	*	1
	13-16K	*	*	*	*	*	0	0	0	0	0	*	*
	17-20K	*	*	*	0	0	0	0	0	0	0	0	0
	≧ 21K	*	0	0	0	0	0	0	0	0	0	0	0
Freezing Rain	8-12K	0	0	0	0	0	0	0	0	0	0	0	0
	13-16K	0	0	0	0	0	0	0	0	0	0	0	0
	17-20K	0	0	0	0	0	0	0	0	0	0	0	0
	≧ 21K	0	0	0	0	0	0	0	0	0	0	0	0
Snow/Sleet	8-12K	0	0	0	0	0	0	0	0	0	0	0	0
	13-16K	0	0	0	0	0	0	0	0	0	0	0	0
	17-20K	0	0	0	0	0	0	0	0	0	0	0	0
	≧ 21K	0	0	0	0	0	0	0	0	0	0	0	0

TEMPERATURE - INCIRLIK CDI, TURKEY

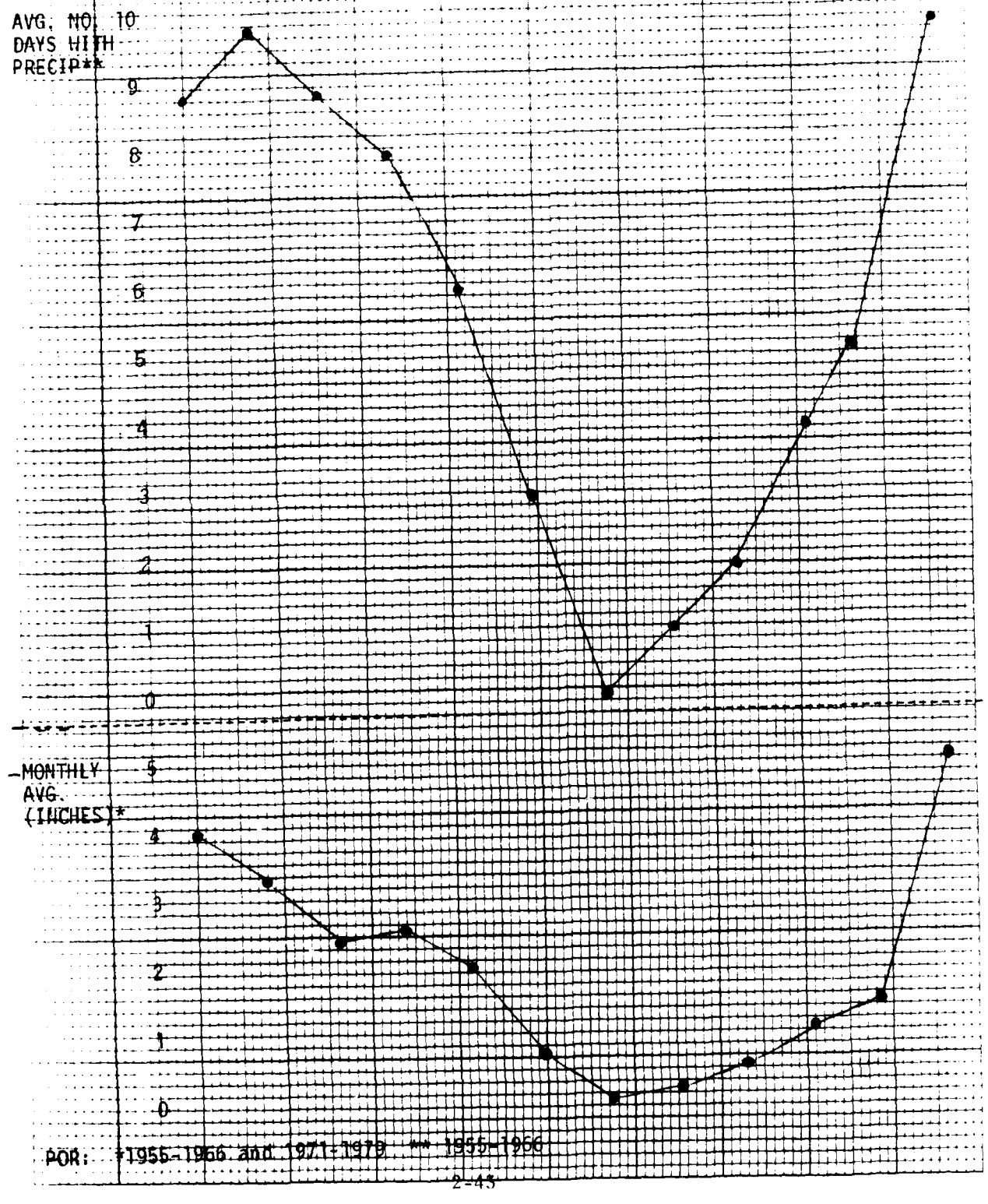


ANNUAL: AVG MAX 77
MEAN 67
AVG MIN 56

POR: 1955-1966

PRECIPITATION - INCIRLIK CDI, TURKEY

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
DAYS WITH MEASURABLE PRECIP**	9	10	9	8	6	3	0	1	2	4	5	10
MONTHLY AVG. *4.13	3.44	2.51	2.65	2.09	0.94	0.13	0.27	0.54	1.13	1.65	5.05	



POR: *1955-1966 and 1971-1979 ** 1955-1966

AWS CLIMATIC BRIEF

Prepared by ETAC (SEP 1970)

INCIRLIK AB/ADANA, TURKEY — PERIOD: 1955-[illegible] — WBAN # 17350, WMO # 17350

[illegible] 37 00 — [illegible] 35 26 — ELEVATION: 849 FT — MONTH LTR: [illegible]

MONTH	TEMPERATURE (°F) EXTREME MAXIMUM	TEMPERATURE (°F) MEAN DAILY MAXIMUM	TEMPERATURE (°F) MEAN DAILY MINIMUM	TEMPERATURE (°F) EXTREME MINIMUM	PRECIPITATION (in) MEAN TOTAL	PRECIPITATION (in) GREATEST IN 24 HOURS	PRECIPITATION (in) MEAN SNOWFALL	PRECIPITATION (in) GREATEST SNOWFALL IN 24 HOURS	WIND (KT) PREVAILING DIRECTION	WIND (KT) MEAN SPEED	WIND (KT) EXTREME SPEED (FASTEST MILE)	MEAN RELATIVE HUMIDITY (%) 0600	MEAN RELATIVE HUMIDITY (%) 1300	MEAN DEW POINT (°F)	MEAN PRESSURE (mb)	99.9% PRESSURE ALTITUDE	MEAN NUMBER OF DAYS PRECIP ≥ 0.01	PRECIP ≥ 0.5	SNOWFALL ≥ 0.1	SNOWFALL ≥ 2.5	THUNDERSTORMS	FOG (< 1 KILOM)	TEMPERATURE (°F) MAXIMUM ≥ 90	TEMPERATURE (°F) MAXIMUM ≤ 80	TEMPERATURE (°F) MINIMUM ≤ 32	TEMPERATURE (°F) MINIMUM ≤ 0	MEAN SKY COVER (TENTHS)
JAN	71	58	48	17	4.3	3.4	#	#	NNE	9	46	70	51	37	.22	600	9	3	#	0	3	2	0	0	3	0	6
FEB	79	60	43	25	2.5	2.1	#	#	NNE	8	38	74	51	38	.23	650	10	3	0	0	3	5	0	0	2	0	6
MAR	84	66	46	29	1.7	1.9	#	#	NE	8	55	74	47	42	.27	700	9	2	0	0	3	2	0	1	1	0	6
APR	98	73	58	35	1.6	3.5	0	0	NNE	7	51	80	47	50	.36	650	8	1	0	0	5	3	#	5	0	0	5
MAY	103	81	58	44	2.1	4.5	0	0	NNE	5	39	86	47	56	.45	600	6	1	0	0	6	4	5	17	0	0	4
JUN	108	89	66	55	0.9	2.0	0	0	NNW	6	35	84	43	62	.56	650	3	1	0	0	3	5	13	28	0	0	3
JUL	111	93	72	58	0.1	1.3	0	0	NNW	6	37	84	44	68	.68	700	#	0	0	0	1	6	26	31	0	0	2
AUG	114	96	72	57	0.3	1.8	0	0	NW	6	34	79	40	67	.66	650	1	#	0	0	#	3	30	31	0	0	2
SEP	104	92	66	54	0.5	1.4	0	0	NE	7	48	72	35	58	.48	600	2	#	0	0	2	1	19	30	0	0	2
OCT	103	83	59	41	1.2	3.1	#	#	NE	7	47	66	33	50	.36	500	4	#	0	0	3	1	6	22	0	0	3
NOV	101	73	48	32	2.0	3.5	#	#	NE	7	40	67	39	44	.29	500	5	1	0	0	3	#	0	6	0	0	4
DEC	80	62	46	25	4.7	5.4	#	#	NE	8	44	70	52	40	.25	650	10	3	0	0	3	3	0	#	1	0	6
ANN	114	77	56	17	25.0	5.4	#	#	NE	7	47	76	44	51	.37	650	67	15	#	0	35	35	99	171	7	0	4
EYR	11	11	11	11	11	11	11	11	12	12	55	12	12	12	12	12	11	11	11	11	11	11	11	11	11	11	12

REMARKS:

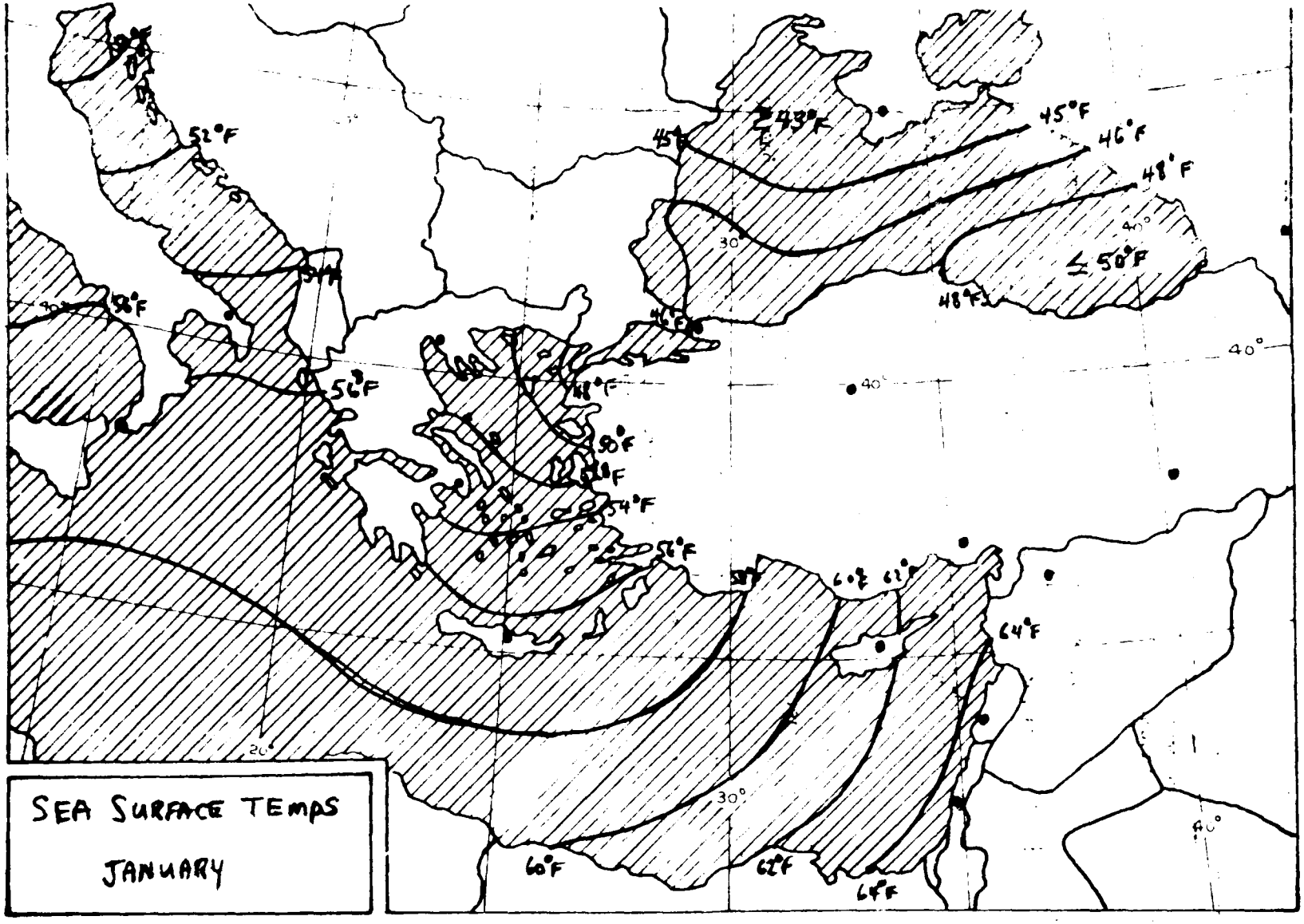
RUNNO FOR: Hourly Obs: May 55-May 67
Daily Obs: May 55-May 65, Aug 65-Feb 66

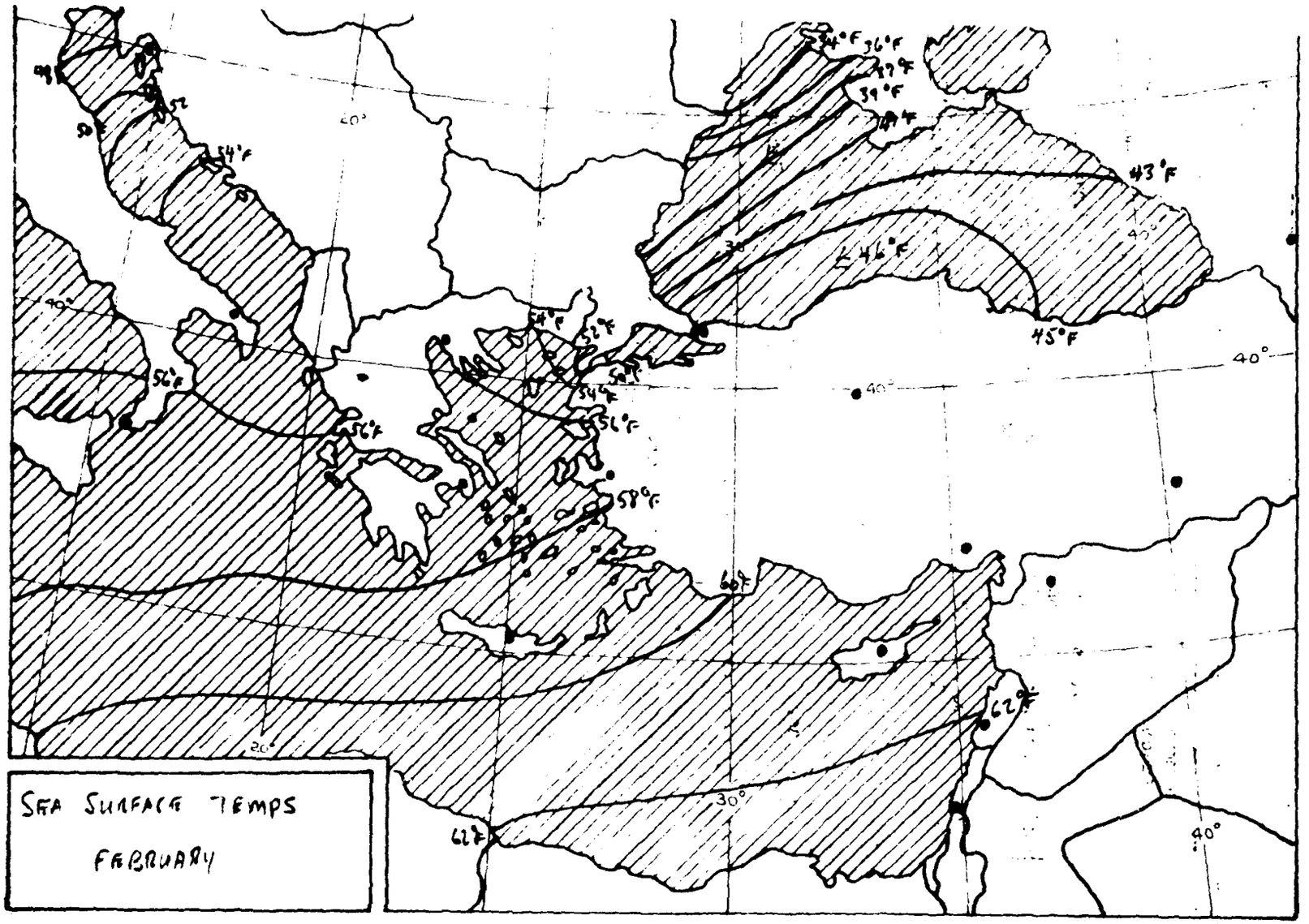
NOTE: *DATA NOT AVAILABLE. #LESS THAN 0.5 DAY, 0.5 OR 0.05 INCH, OR 0.5 PERCENT (%) AS APPLICABLE.

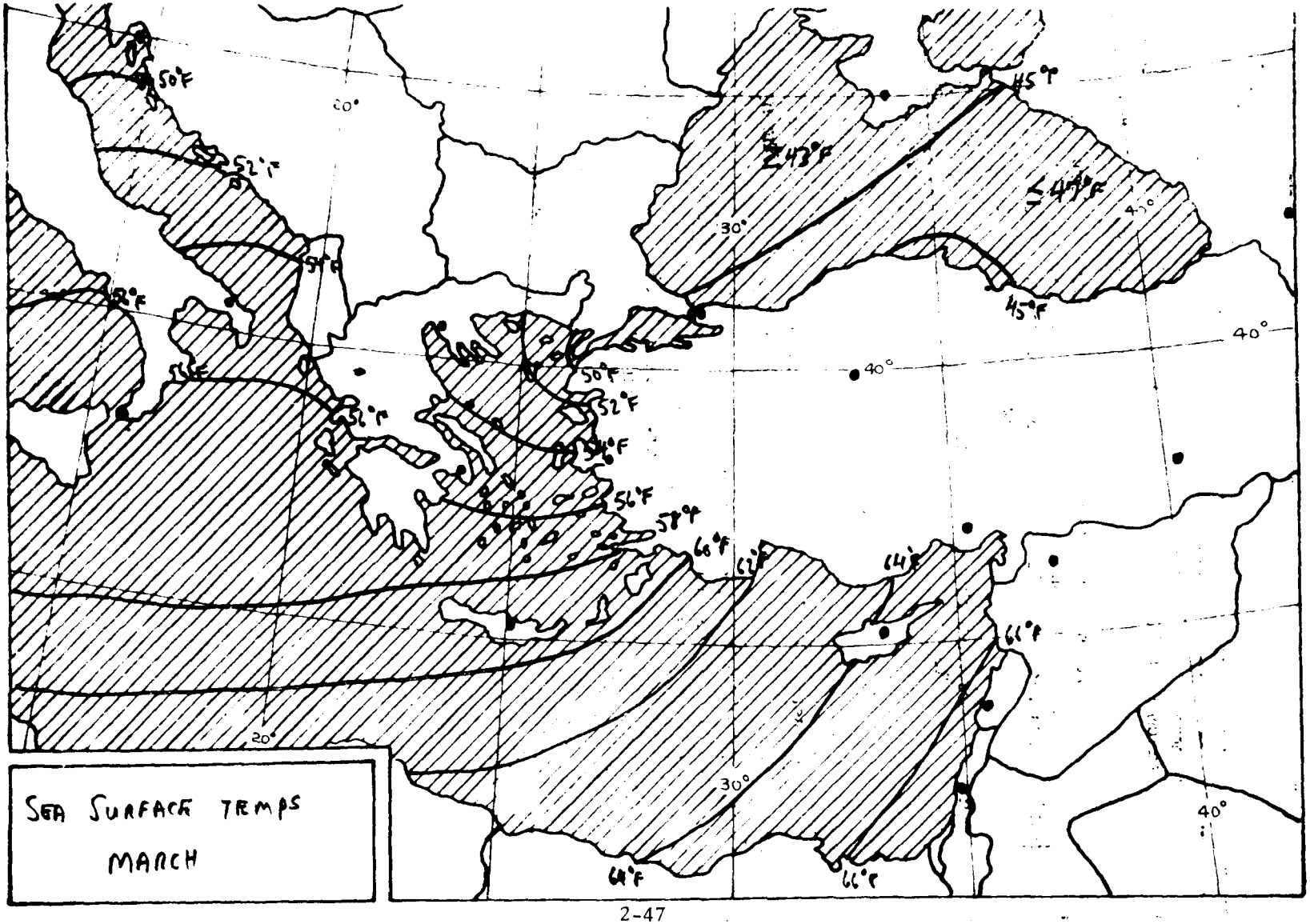
FLYING WEATHER (% FREQ)	HOURS (LST)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN	EYR
CIG less than 3000 feet and/or VSBY less than 3 miles	00-02	5	8	5	9	8	10	13	6	2	1	2	7	6	
	03-05	5	7	5	10	8	9	12	7	2	1	2	6	6	
	06-08	5	6	5	10	9	12	15	7	2	1	2	7	7	
	09-11	5	6	5	10	10	9	10	5	3	1	2	6	6	
	12-14	6	6	7	9	7	5	5	2	1	1	1	8	5	
	15-17	6	6	6	4	5	2	2	1	#	1	2	8	4	
	18-20	6	5	5	4	4	3	3	1	1	1	1	6	3	
	21-23	5	6	5	7	6	7	10	6	3	1	1	6	5	
	ALL HOURS	6	6	5	8	7	7	9	4	2	1	2	7	5	12
CIG less than 1500 feet and/or VSBY less than 3 miles	00-02	#	2	2	2	3	4	4	1	#	1	1	#	2	
	03-05	0	1	2	2	3	3	4	2	1	1	#	1	2	
	06-08	1	1	1	2	2	3	2	1	1	#	#	1	1	
	09-11	#	1	1	1	1	#	#	0	0	#	1	2	1	
	12-14	1	1	1	#	1	0	0	0	0	0	#	2	1	
	15-17	1	1	1	#	#	#	0	0	0	#	1	2	1	
	18-20	1	1	1	1	#	#	0	#	0	0	#	1	#	
	21-23	1	1	1	1	2	2	2	1	1	#	1	1	1	
	ALL HOURS	1	1	1	1	2	2	2	1	#	#	#	1	1	12
CIG less than 1000 feet and/or VSBY less than 2 miles	00-02	0	1	1	1	1	1	1	#	0	1	#	#	1	
	03-05	0	1	1	1	1	2	1	1	#	1	#	1	1	
	06-08	0	#	1	1	1	1	#	#	#	#	#	1	#	
	09-11	#	#	#	0	#	#	0	0	0	0	#	1	#	
	12-14	#	#	#	#	#	0	0	0	0	0	#	1	#	
	15-17	#	1	#	#	#	#	0	0	0	#	#	1	#	
	18-20	0	#	#	0	#	0	0	#	0	0	#	1	#	
	21-23	#	1	1	#	#	#	#	0	0	#	#	#	#	
	ALL HOURS	#	1	1	#	1	1	#	#	#	#	#	1	#	12
CIG less than 200 feet and/or VSBY less than ½ mile	00-02	0	0	0	#	0	0	0	0	0	#	0	0	#	
	03-05	0	0	#	#	#	1	#	#	0	#	0	#	#	
	06-08	0	#	#	#	#	#	0	#	#	#	#	#	#	
	09-11	0	0	0	0	0	0	0	0	0	0	#	#	#	
	12-14	0	0	0	0	0	0	0	0	0	0	#	#	#	
	15-17	0	0	0	0	0	0	0	0	0	0	#	#	#	
	18-20	0	0	0	0	0	0	0	0	0	0	#	0	#	
	21-23	0	0	0	0	0	0	0	0	0	0	0	0	0	
	ALL HOURS	0	#	#	#	#	#	#	#	#	#	#	#	#	

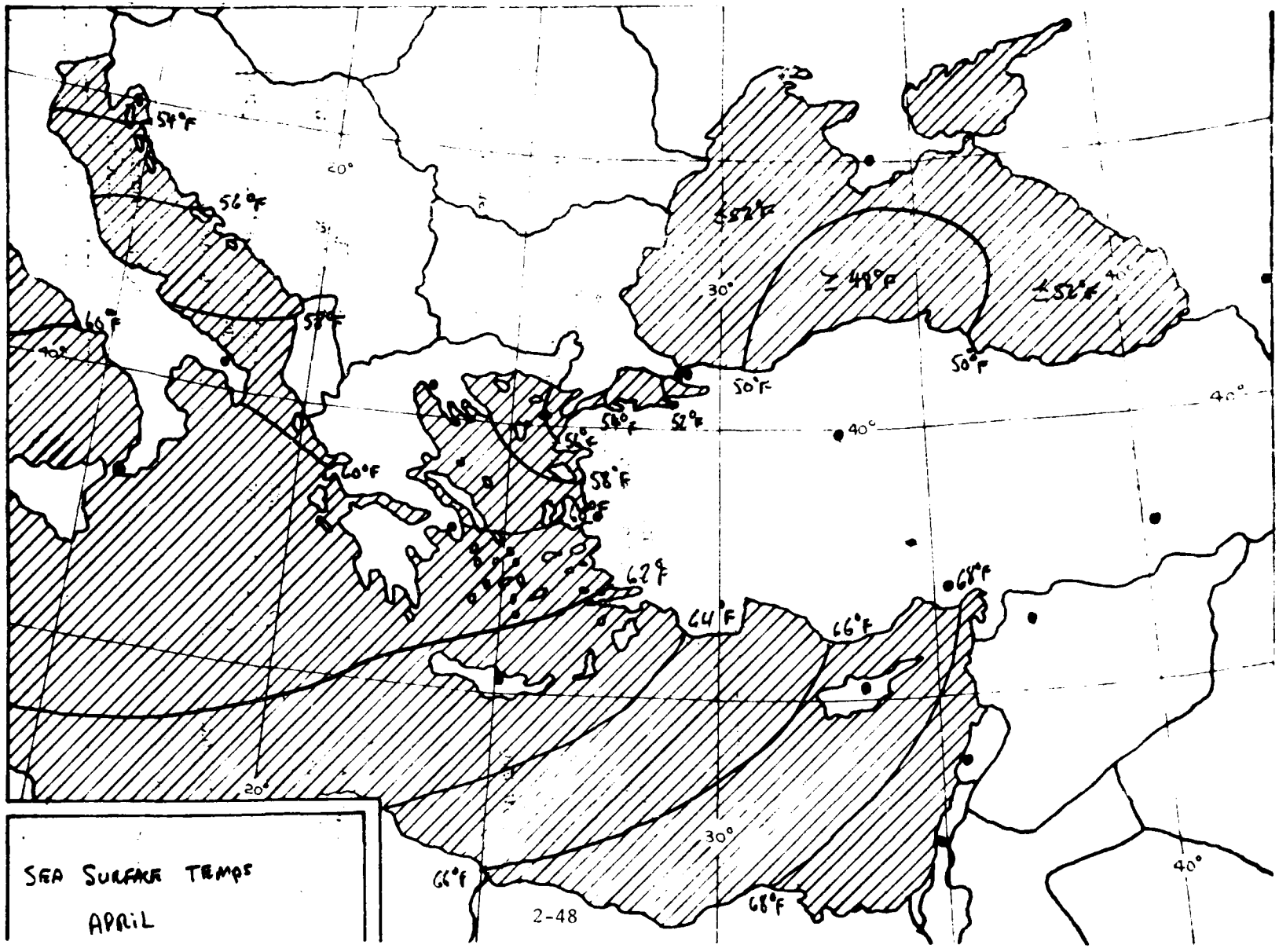
AWS FORM NOV 67 62

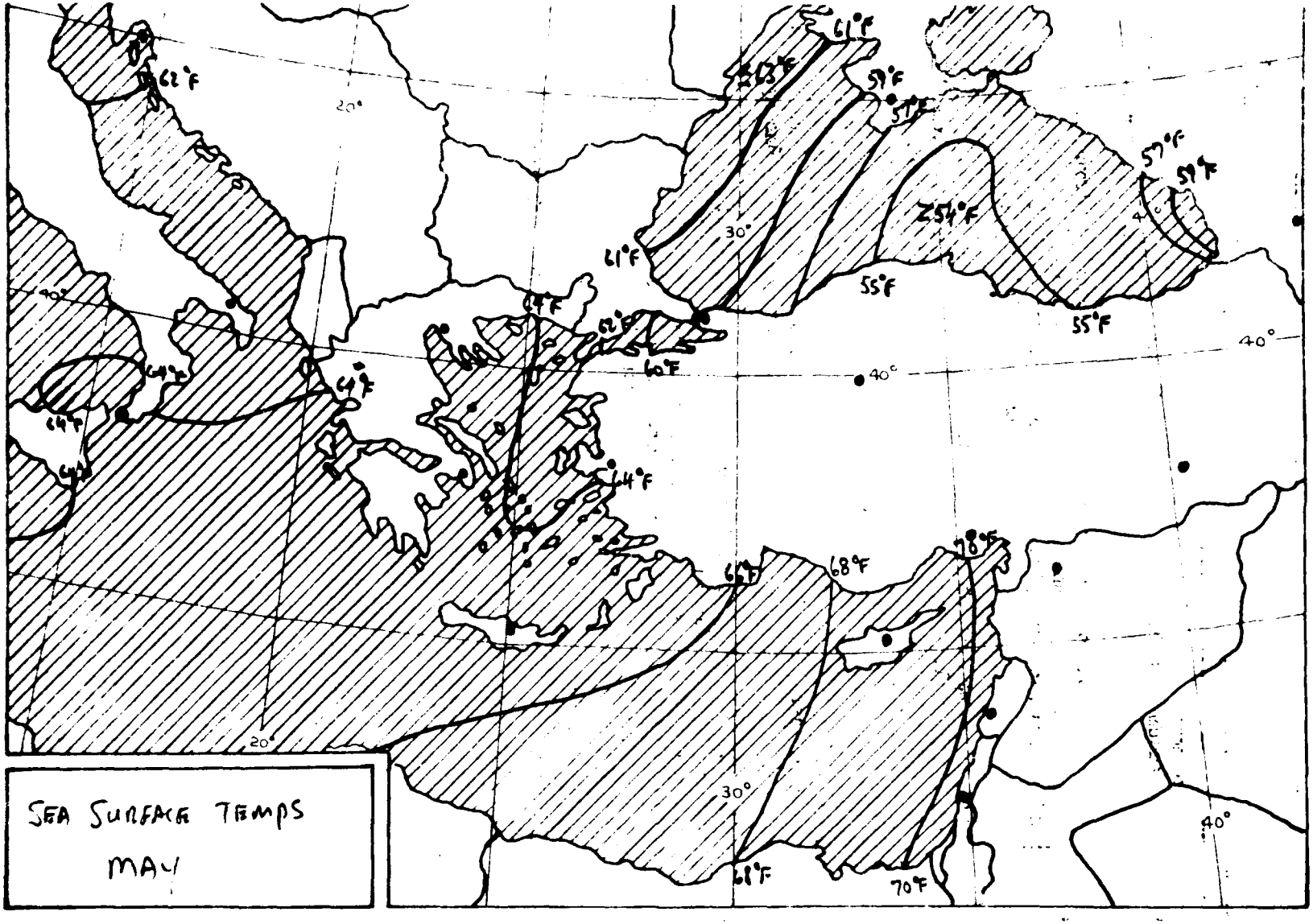
AWSP 105-4-VOL [illegible]

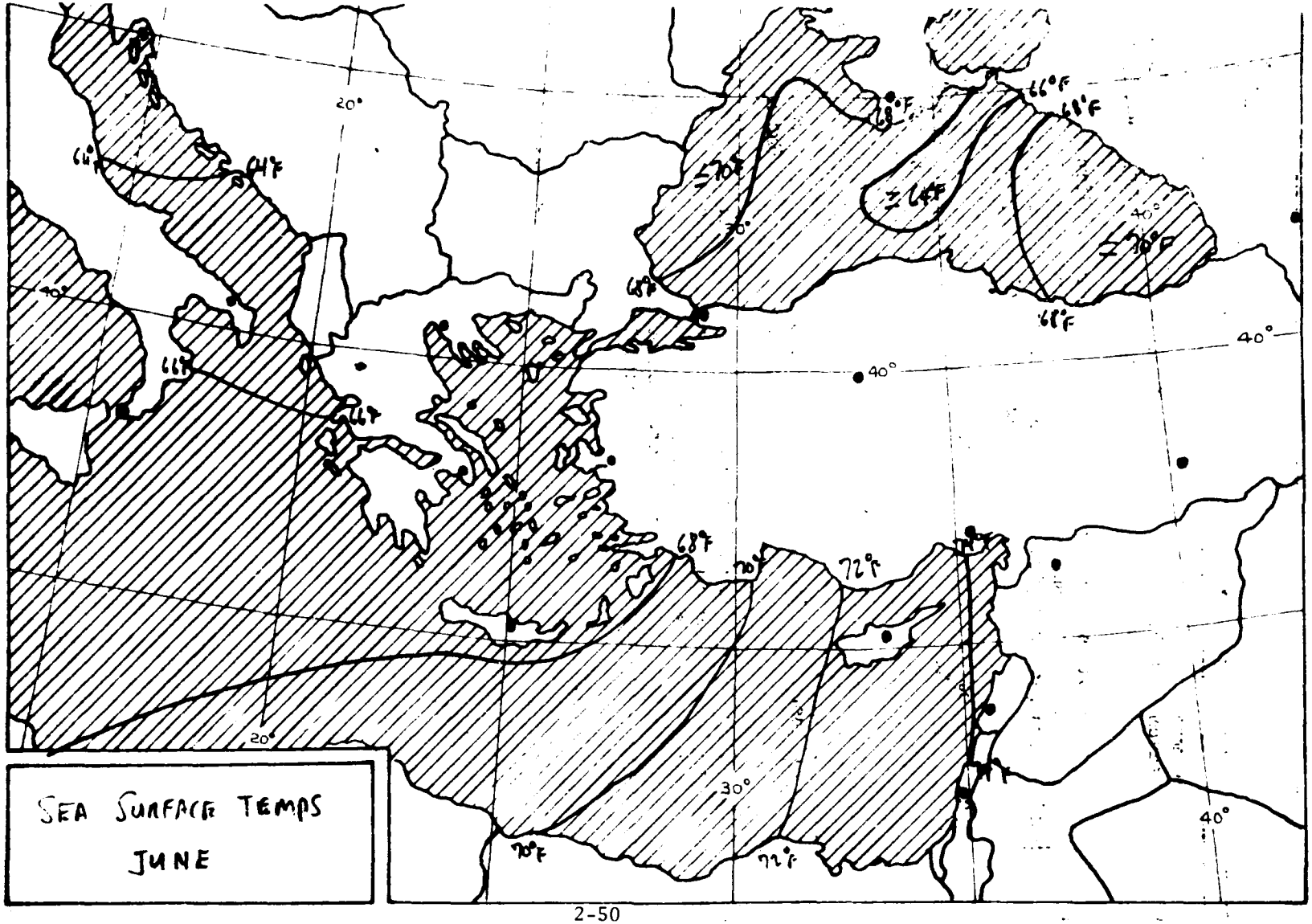

SEA SURFACE TEMPS
JANUARY
52°F
45°F
46°F
48°F
≤ 50°F
48°F
40°
30°
20°
54°F
64°F
60°F
62°F
64°F

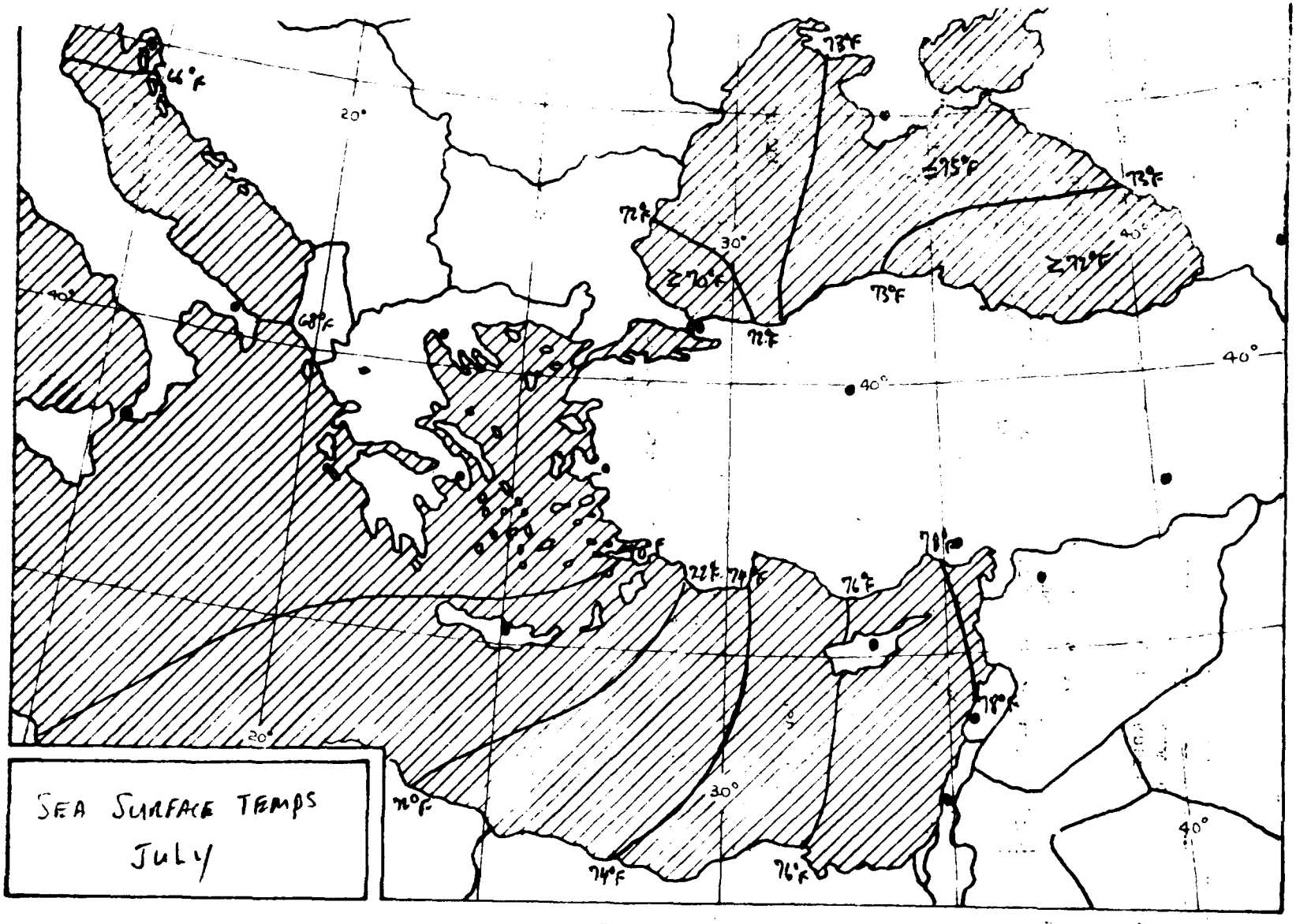

SEA SURFACE TEMPS
FEBRUARY
34°F
36°F
37°F
39°F
43°F
46°F
45°F
54°F
52°F
56°F
56°F
51°F
58°F
60°F
62°F
62°F
40°
30°
20°

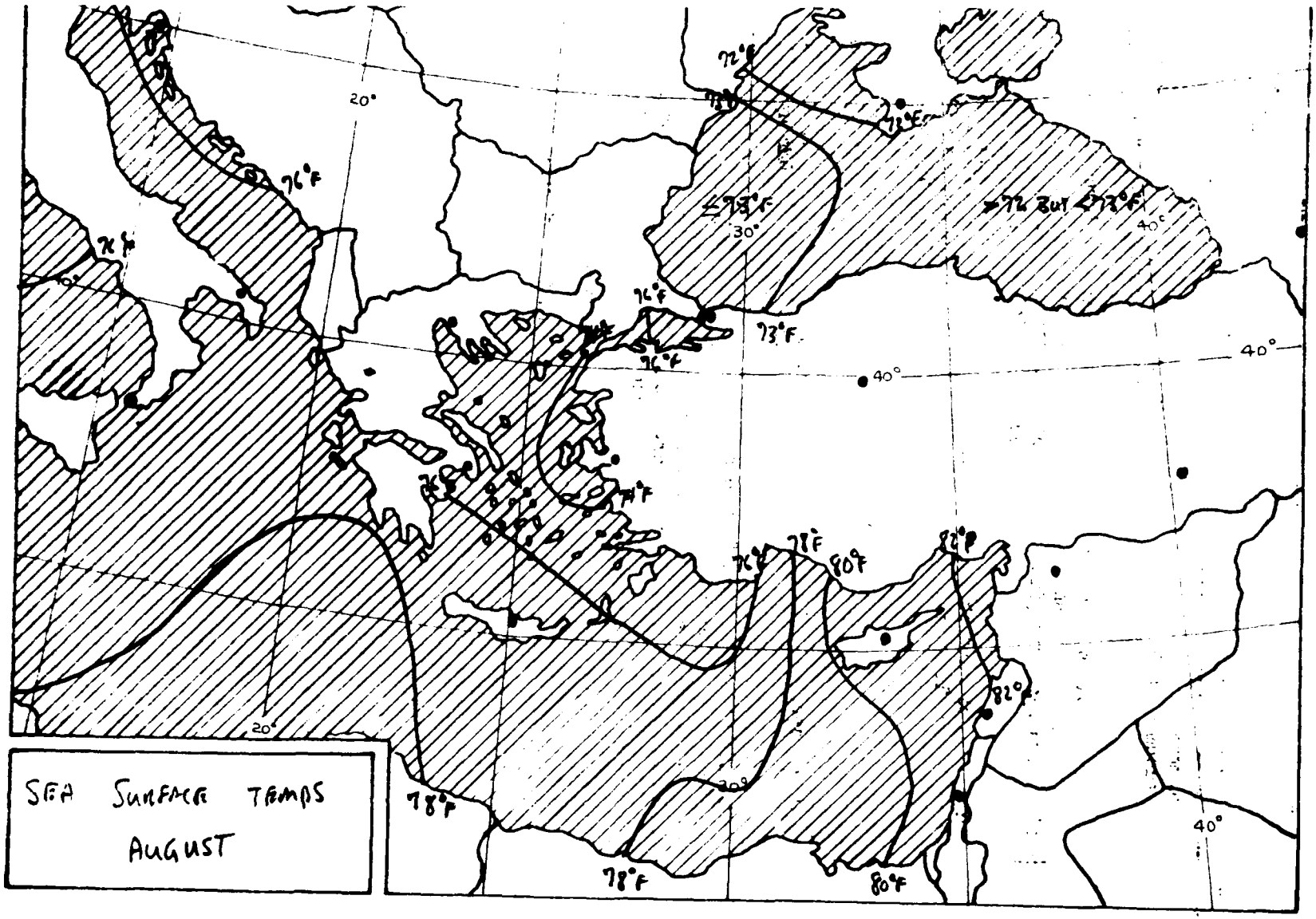

50°F
52°F
43°F
≤ 45°F
45°F
50°F
52°F
54°F
56°F
58°F
60°F
62°F
64°F
61°F
64°F
66°F
20°
30°
40°
SEA SURFACE TEMPS
MARCH

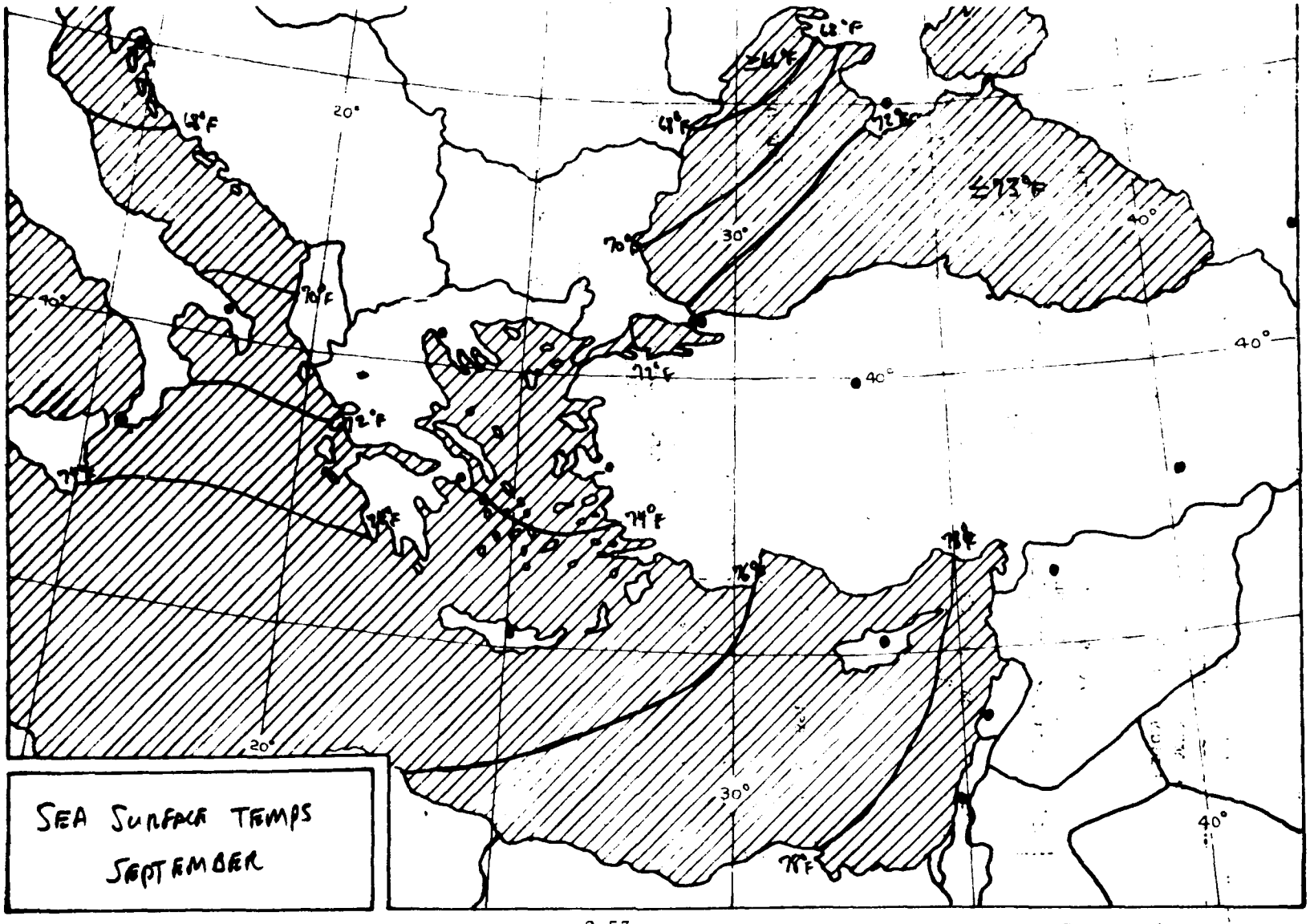

54°F
56°F
60°F
58°F
52°F
50°F
50°F
52°F
58°F
60°F
62°F
64°F
66°F
68°F
66°F
68°F
20°
30°
40°
40°
40°
SEA SURFACE TEMPS
APRIL

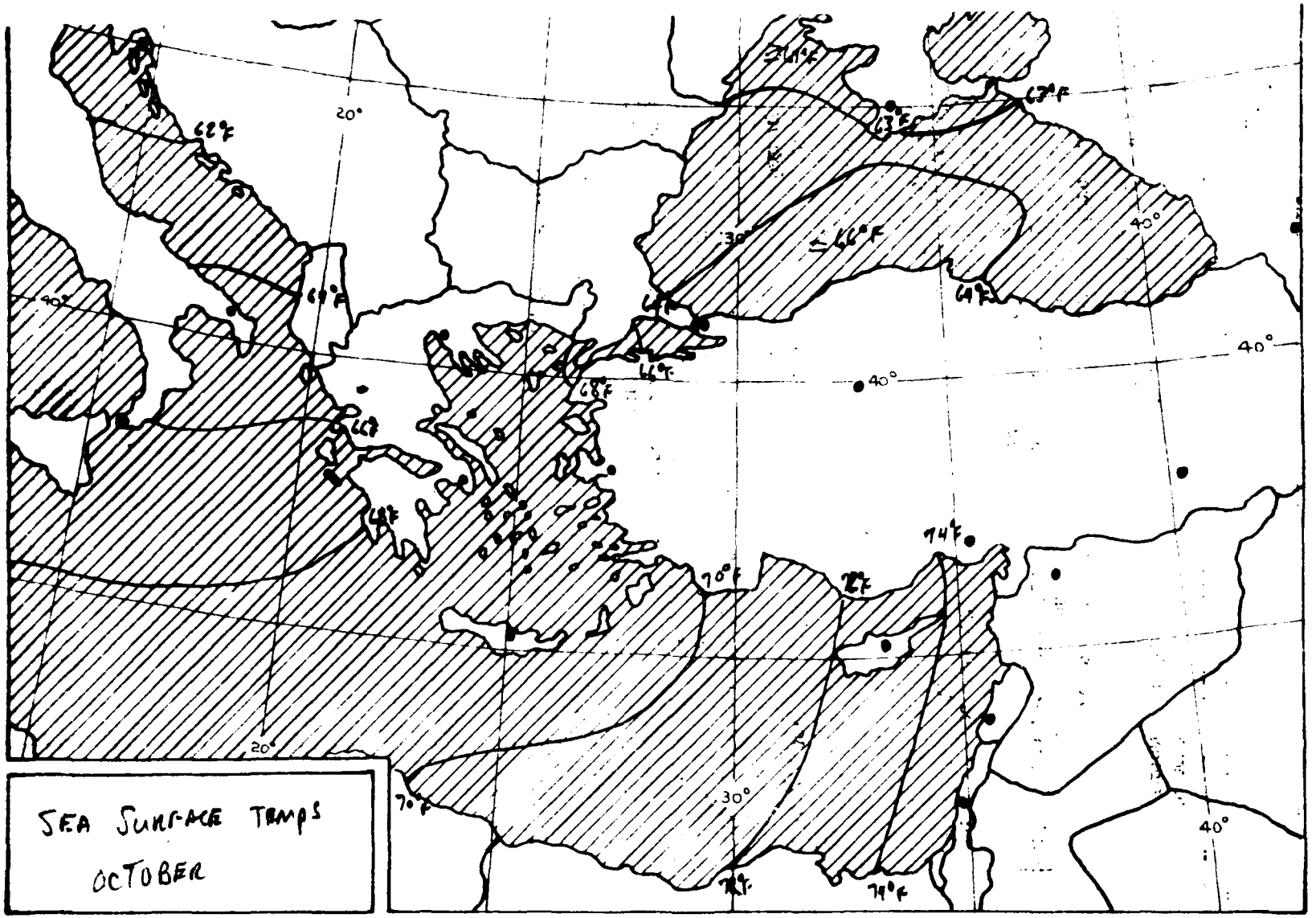

SEA SURFACE TEMPS
MAY
62°F
61°F
59°F
57°F
54°F
55°F
60°F
64°F
68°F
70°F
20°
30°
40°

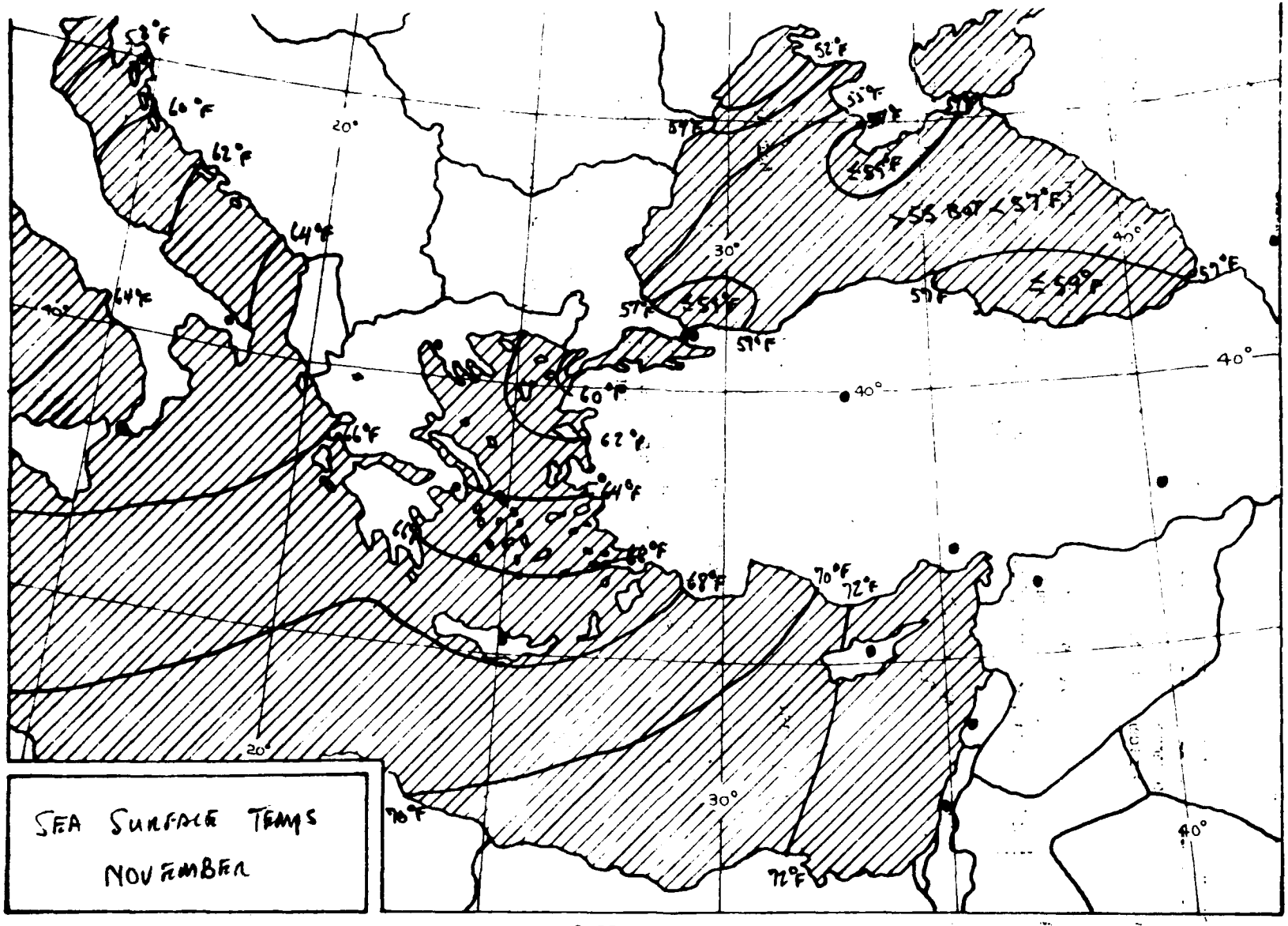

20°
64°F
64°F
70°
68°F
66°F
61°F
57°F
64°F
70°F
68°F
40°
40°
64°F
64°F
68°F
70°
72°F
72°F
20°
30°
40°
70°F
72°F
SEA SURFACE TEMPS
JUNE

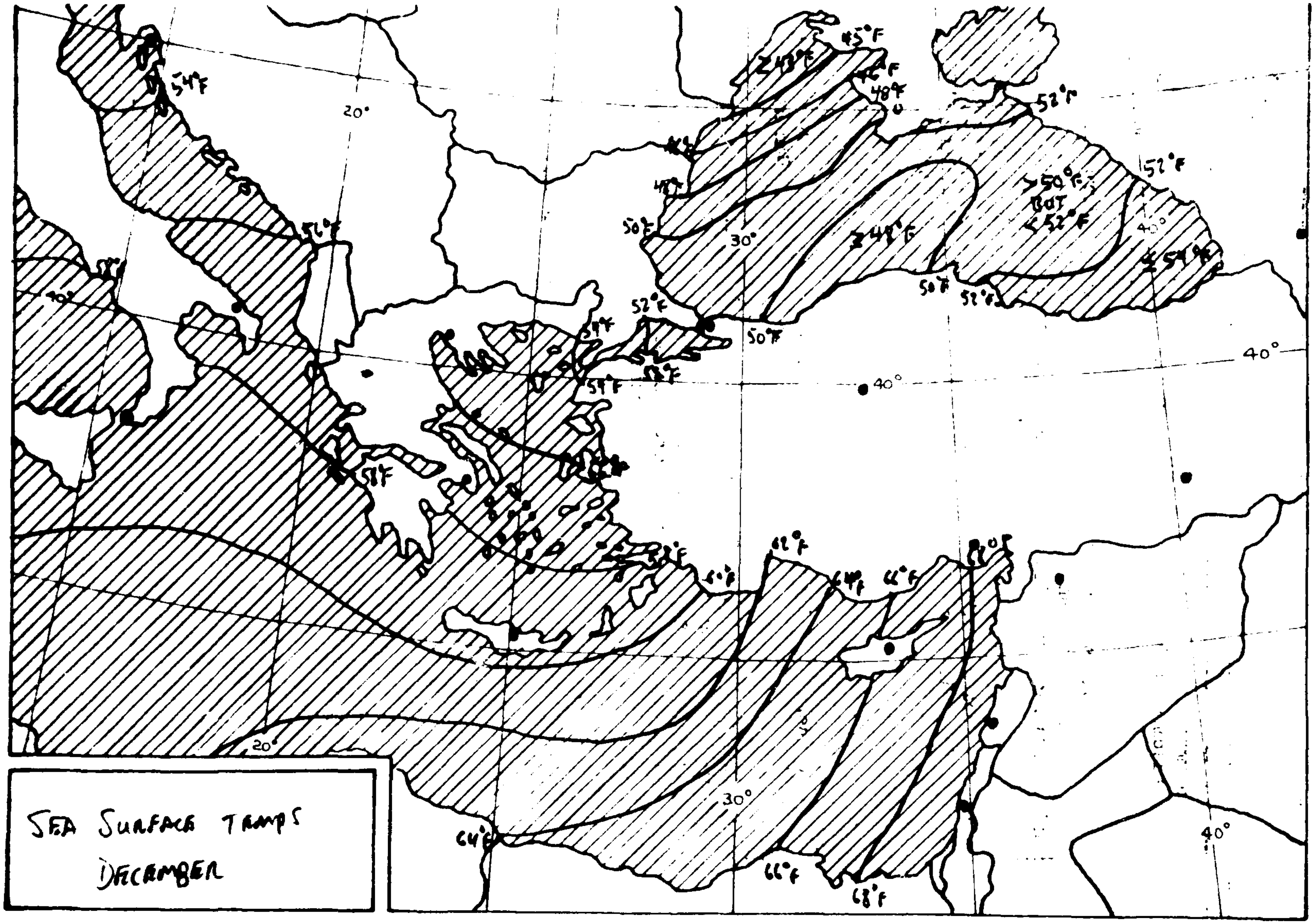

SEA SURFACE TEMPS
JULY
20°
30°
40°
73°F
75°F
77°F
68°F
74°F
76°F
78°F
22°C


SEA SURFACE TEMPS
AUGUST
20°
30°
40°
78°F
80°F
82°


SEA SURFACE TEMPS
SEPTEMBER
20°
30°
40°
70°
72°F
74°F
76°F
78°F


SEA SURFACE TEMPS
OCTOBER
20°
30°
40°
70°F
74°F


SEA SURFACE TEMPS
NOVEMBER
60°F
62°F
64°F
64°F
52°F
53°F
57°F
57°F
57°F
57°F
59°F
59°F
57°F
60°F
62°F
64°F
66°F
68°F
70°F
72°F
70°F
72°F
20°
30°
40°
40°
20°
30°
40°


SEA SURFACE TEMPS
DECEMBER
20°
30°
40°
54°F
56°F
58°F
45°F
48°F
50°F
52°F
≥48°F
>50°F BUT <52°F
62°F
64°F
66°F
68°F

METEOROLOGICAL TECHNIQUES

1. DEFINITION: Meteorological techniques are comprised of several reference books which contain techniques applicable to our LAFP.

2. PROCEDURES: The forecaster will:

a. Obtain ideas to apply to Incirlik and our forecasting problems & document them for possible development of rules-of-thumb or forecaster hints.

b. Modify and adapt these procedures to satisfy mission requirements.

c. Apply these forecasting techniques whenever possible.

d. Through channels AWS/DN:

(1) Send reliable, proven techniques.

(2) Recommend removal, techniques regarded as invalid.

3. CONTENTS:

a. Part 1.

(1) AWSP 55-1 Aircraft Performance Characteristics and Weather Sensitives and AWSVA 55-1 USAF Aircraft Characteristics.

(2) AWSP 105-56 contains forecasting techniques in a graphical or a condensed form. Included are:

(a) Briefings and discussions.

(b) Forecasting Weather Elements.

1 Surface

2 Severe

3 Flight

(c) Analysis and prognosis techniques.

(d) Applied climatology.

(e) Centralized Weather Products.

(f) Special Topics.

(3) AFGWC Philosophy.

(4) PUP (2WWTN 78-3).

(5) Baur Types.

b. Part 2. Handbook for Forecasters in the Mediterranean.

FORECASTER'S AID

1. Thunderstorms rarely occur if 500 mb temp is warmer than -17 degrees.

2. Local Thunderstorms will not occur if the jet is south of Beirut(OLBA).

3. Thunderstorms occur more frequent when a Thermal trof is ahead of the contour trof.

4. Spring and Fall nocturnal Thunderstorms can occur unexpectedly when the low level winds are ESE-SSW and 500 mb winds are W-NW. Watch NICOSIA for a 500 mb wind shift. TSTMS form over the mountains to the west and advect over LTAG.

5. Winter TSTMS occur more at night when a SW Flow (due to deep trofing) is lifted by the cooler drainage wind.

6. BEWARE of a surface Low in the Eastern Mediterranean back dooring us. No Front is necessary. Takes careful analysis to depict.

7. If the U/A jet moves south it normally brings cold enough temperatures to cause TSTMS.

8. June thru October has a rare TSTM occurance.

9. Solid long lasting Stratus ceilings rarely occur at LTAG.

10. Cold Fronts are weak & diffuse or do not reach LTAG from May thru October due to the modifying effect of the Anatolion Plateau.

11. TSTM activity along the Taurus mountains following a frontal passage end with the passage of the 300 mb trof.

12. Maximum wind gust associated with winter cold fronts at LTAG will usually be 10 knots less than Silifki (17330) in the preceding two hours.

13. Winter frontal passage is generally indicated by a 10 to 15 degree drop in dew point.

14. MWA criteria winds can occur when a NE gradiant is in conjunction with a Drainage wind (winter or summer).

WEATHER CONTROLS

Due to its location, Incirlik experiences a Mediterranean type climate, a short mild winter and a long hot summer. During the winter months the Taurus range acts as a barrier blocking all but the most intense cold outbreaks. The intensity of fronts which move in from the northwest is greatly diminished by the adiabatic effect when passing over the Taurus Mountains and down to the near sea level elevation of the Cilician Plain. The air masses are warmed and dried, with the only effect being gusty surface winds from the northwest through northeast. The mountains which ring the plain from west through north through east form a basin in which the air often stagnates. This condition is more common during the summer months and the mountains are found to be generally obscured by haze.

SYNOPTIC PATTERNS

1. Cloudiness is most prevalent during the winter months, reaching a maximum during December and January. Incirlik is situated at the northeast corner of the Mediterranean Sea at the end of air trajectories which often have had a long over-water fetch. However, the Taurus Mountains, which extend to the Mediterranean Sea west southwest of Incirlik act as a protecting barrier as far south as the 240 degree radial from the base. A wind direction of less than 200 degrees usually gives flow off the dry Sahara, and the trajectory across the Mediterranean is too short to pick up significant moisture. The exception to this would be a system which moves eastward through the channel between Cyprus and Turkey. During the summer months the skies are predominately clear. Low stratus develops late in the evening, lasts one-two hours, reforms again near daybreak, and then dissipates rapidly. Fog is not a problem at Incirlik. Conditions of less than 200 feet and 1/2 mile occur less than 0.1% of the time. The northeast drainage flow effectively prevents the formation of fog in the immediate vicinity of the base. From late spring to mid fall visibilities may be reduced to approximately 1 mile in cement dust when the winds are southeasterly and light. This condition normally occurs at mid day. Incirlik is situated in a favorable location weatherwise. Conditions of equal to or better than 1500 feet and/or 3.0 miles occur 99% of the time.

2. Summer is the dry period at Incirlik with the mean monthly precipitation less than one inch from July through October. During July and August measureable precipitation seldom occurs. Precipitation during the summer months results from thunderstorms building over the western mountains and then moving across the plains during the late afternoon hours. January and February, with an average of between four and five inches, are the months of heaviest precipitation. Thunderstorm activity occurs mainly with the seasonal passage of the polar front. It reaches a maximum of four thunderstorm days per month during April and May with the northward passage, and four days with the southward passage in October. During the spring and fall, thunderstorm activity occurs more frequently over the mountains north through east of the base when the Cilician Plain is under moist, southwest flow. During the rainy season thunderstorms are confined mainly to the water areas and move on shore as heavy rain showers. Incirlik averages two thunderstorm days per month from November through March. Conversely, from June through September, the activity occurs mainly on the mountains north through east, with one to two thunderstorm days per month.

3. The surface wind at Incirlik generally varies as a function of the land-sea breeze effect. During the summer months the direction tends to be southwesterly from mid-morning until early evening and northeasterly from near midnight until a few hours after sunrise. In the few hours between the two domains the wind is either calm or light and variable. The northeast drainage flow predominates during the winter months, where as a combination of the two prevails during the transition period. The strongest winds occur with deepening lows approaching from the southwest or cold outbreaks from the north. Even then the direction is nearly that of the runway heading.